A Model for Integrated, High-Rise Urban Living: Learning from Durban's Beachfront

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ABSTRACT

This study explores the potential of architecture, specifically the residential high-rise, to act as an instrument of spatial justice. It does so by raising a socio-spatial lens to the flats on Durban Beachfront and to the diverse people who inhabit these blocks today. As the research illustrates, the status quo in the study area stands contrary to persistent economic and racial residential segregation in South Africa, thereby challenging low-density development in the country—still the norm 25 years after apartheid. Framed around the notion of spatial justice and the Right to the City, theoretical investigations consider the relationship between inequality and city form, and the role that new housing should play in moving from fragmented to integrated city fabric. The living environments found on Durban Beachfront are counterposed with contemporary housing in South Africa and abroad, to establish what activates 'the commons' and to better understand the advantages, disadvantages, and potentialities of vertical urban living. The dissertation interrogates the high-rise building in terms of its suitability for human habitation, the residential density enabled by height, and the possibilities it engenders for meaningful contact and diverse living. Combining interviews and observational data in an ethnographic approach, the study moves between different types of analysis—descriptive, analytical, and normative—to unlock the operational complexity embedded in this unique place and learn about its successes and failures from the user perspective. Immersive fieldwork comprised 101 questionnaire-based interviews, self-administered in participants' flats, enquiring into their dwelling experience at four spatial scales, from Individual to Neighbourhood. Results confirmed the human diversity present in this urban strip and found high satisfaction levels across the board, regardless of demographic profile or moderating factors such as floor level, indoor density, or relationship between occupants. Findings reaffirm the improved quality of life that results from inner-city convenience; access to quality public space and nature; and the peace of mind offered by a secure high-rise in a high-crime society. I develop a term, 'verticolopa', to describe a high-rise, high-density structure that combines climatically and culturally responsive architectural design with new social landscapes to optimise vertical urban living in this context. The dissertation ends on a normative note, with a set of design guidelines for a new model of mixed-use, mixed-tenure, mixed-income urban housing—the ideal type Verticolapa—which promises real possibilities for urban living that is integrated, affordable, accessible, attractive, and which takes Anthropocene challenges into account.

Declaration

Submitted in fulfilment of the requirements for the degree of
DPhil in the Built Environment,
in the Graduate Programme in Architecture,
Durban University of Technology,
South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was used and that my Supervisor was informed of their identity and details.
This work is being submitted to the Urban Futures Centre,
Faculty of Engineering and the Built Environment, DUT.

None of the present work has been submitted previously for any degree or examination in any other University.

_____

Lindsay Ann Bush

31.07.22

Date

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This work is dedicated to the memory of

Mihlali 'Lolo' Morris (31 March 2007 – 15 November 2019), because I wish more than anything to live in a world where you could have been my neighbour.

and

Mr B (19 April 1943 – 19 July 2021) for your inspiration and kindness. Your legacy lives on not just in bricks and mortar, but in the countless lives you touched.

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Glossary of Terms

braai	barbeque (Afrikaans)
CBD	Central Business District
CBO	Community-Based organisation
CPF	Community Policing Forum
CRU	Community Residential Unit (ex-hostel converted to family co-housing)
dagga	marijuana
DUT	Durban University of Technology
EM	Ethekwini (Durban) Municipality
FE	Fire Escape
FHR	Fire Hose Reel
GAA	Group Areas Act
GCHS	George Campbell High School
HUD	(US Department of) Housing and Urban Development
ICHUT	(Johannesburg) Inner City Housing Upgrading Trust
IDP	(South African) Integrated Development Plan
izikebengu	criminals (isiZulu)
MBC	Mangrove Beach Centre
MUT	Mangosuthu University of Technology
NGL	Natural Ground Level
NPO	Non-Profit Organisation
outies	street-dwellers (slang)
para	dubious street-dweller (slang; from 'parasite')
phuthu	maize porridge (isiZulu)
potjie	3-legged cooking pot (Afrikaans)
QoL	Quality of Life
RDP	(South African) Reconstruction and Development Programme
RH	Retirement Home
SDI	Shack Dwellers International
SB	Share Block
SES	Socio-Economic Status
SH	Social Housing
SHC/A/I	Social Housing Company/Association/Institution
shisanyama	grilled meat; venue serving grilled meat (isiZulu)
SR	Student Residence
ST	Sectional Title
SUV	Sports Utility Vehicle
tsotsi	criminal/thug (isiZulu)
UDF	(National) Urban Development Framework
UKZN	University of KwaZulu-Natal
UIP	Urban Improvement Precinct
usikhotheni	a homeless person (isiZulu)
WC	water closet/ toilet
WHB	wash hand basin

Introduction

> "Utopia is to be considered experimentally by studying its implications and consequences on the ground. These can surprise. What are and what would be the most successful places? How can they be discovered? According to which criteria? What are the times and rhythms of daily life which are inscribed and prescribed in these 'successful' spaces favourable to happiness? That is interesting." (Lefebvre 1996: 370)

In the field of architecture, the focus on research is primarily aimed at establishing site-scale design parameters and drivers. Very rarely do designers or developers return to finished buildings and enquire into how they are inhabited and experienced, what meanings they hold for their occupants, or why—as Henri Lefebvre asks above—some places are more adept at fostering happiness than others. It seems we are competent at measuring the exchange value of urban space as it relates to monetary worth and linear land market structures, but not where it relates to urban use value.

The use value of urban space is in its daily function, takes many forms, and is generated through non-linear city processes located anywhere along the formal/informal and social/spatial continua. The sense of its value is mutable, and therefore harder to trace and validate (Marx 2022). In the paper *Getting Off the Ground,* Graham and Hewitt (2012) identify an embedded horizontalism in urban research, noting that "very few books or papers in Anglophone urban social science or critical urban geography explicitly problematise or analyse the vertical qualities of cities and urban life". The present work positions itself at this intersection, investigating how a diverse cross-section of people in a particular context make their homes in tall buildings. The aim is to uncover how this information might inspire new architectural models that employ verticality in response to socio-spatial inequality, persistent residential segregation, and the need for affordable urban housing.

Since the latter part of the 20th century, high-rise living has become increasingly common. In big cities around the world, from Hong Kong to São Paulo, residential and commercial buildings of 40 to 100 storeys dominate the skyline. In Europe and the US, where high-rises have been used for mass social housing projects, this building form has lagged (Jacobs J.M. 2006). Research carried out in Paris, Britain, Canada, Israel and New York (among others) has sought to gauge how specific aspects of high-rise living affect residential satisfaction, covering family relations, the academic performance of flat-dwelling children, the existence of support networks in a tall retirement complex, and the effects of 'crowding', noise, or green space (Evans *et al.* 2003; Gifford 2007). These studies ultimately concurred that mere height above the ground alone cannot be detrimental to one's health and overall quality of life.

Recent years have seen a growing interest in the three-dimensional city and 'vertical urbanism' (Harris 2015). Inter-disciplinary practitioners and researchers such as Urban-Think Tank have focused on developing-world phenomena such as the high-rise squats of contemporary Latin America that convert "the super-signs of a flawed capitalism into [ ] vertical villages" (Maak 2015: 203); Architectural writer Eyal Weizman has investigated the politics of urban verticality—from underground tunnels to surveillance towers—in conflict areas of the Middle East (Graham and Hewitt 2012). But what of the ordinary, everyday reality?

The Urban Towers Handbook catalogues a wide range of contemporary tall buildings, establishing a "typological understanding of high-rise as a planning tool", yet its authors conclude that there is scope to improve this relatively young building type (Firley and Gimbal 2011: 15). Geographer Jane M. Jacobs (2006) in her work on the residential high-rise, encourages researchers to move on from the building form's historical narrative, which focuses on "divergent national conditions of success or failure as a way of complicating or undermining a story of globalization", and instead adopt a more relational approach in figuring out what permits a high-rise building to "flourish in one setting and to languish, perhaps even collapse, in another". She calls for more considered scholarship on the topic, with research that commits to "thinking in a minor way/taking seriously the detours, the fine-grained detail, the exception, the nooks and crannies" (Jacobs 2006). I accepted this challenge.

Background

Built almost exclusively during the middle half of the 20th century (1925-75) for middle-class Whites, the Durban Beachfront's high-rise buildings range from squat Art Deco mansion blocks to soaring Modernist slabs. Today these edifices and their surrounds are home to an estimated 18 500 people (Census 2011, escalated at 0,44% annually), comprising a diverse population of South Africans and African and Asian immigrants. Living conditions vary drastically, from luxury sea-facing holiday homes to overcrowded rental units where one is lucky to find a working elevator.

The resident population within this concentrated area reflects a wide spread of economic profiles—something unusual for South African cities which, prior to 1991 and per the apartheid government's Group Areas Act (GAA), were developed according to differential standards designated for separate races. As such, race and socio-economic status (SES or class) were for many years more or less interchangeable in the country. A departure point for this research was a set of online infographics illustrating demographic data from the nationwide 2011Census, particularly those capturing residential racial distribution across city space.

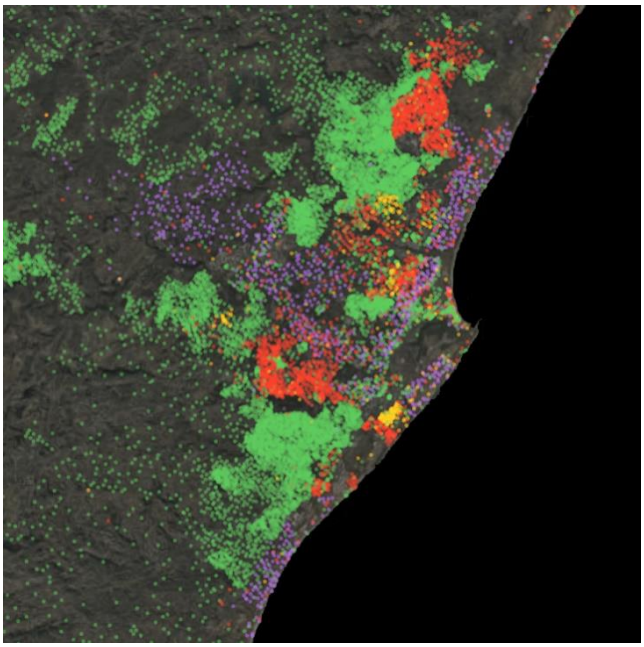


Fig. 1: Satellite image of Metropolitan Durban, overlaid with coloured dots representing different races: green=Black, red=Indian/Asian, purple=White and yellow=Coloured; One dot=10 people; From self-classification in Census 2011.

These 'dot maps' show that Durban's Beachfront, which along with most of the inner city was a White Group Area, is today inhabited by all four major race groups. The high concentration of people in this urban area implies a level of socio-economic mixing not generally seen elsewhere in the country. Distribution across the study area is uneven, but while racial clusters exist in varying degrees at neighbourhood scale, nowhere along the Beachfront has one group taken over completely. In other South African inner cities, populations 'tipped' quite quickly after the change of government, becoming uni-racial once more (Oelofse 2003: 93). Hillbrow, an inner-city high-rise Johannesburg neighbourhood, informally housed non-Whites for 20 years before the GAA was lifted, and thereafter became home to all four race groups (Morris 1999: 347), but by the 2011 Census, more than 98% of its population self-identified as Black African. A good local comparison is the inner-city neighbourhood of Albert Park, which has experienced the same demographic shift. So why did Durban Beachfront's story play out so differently?



Fig. 2: Durban's inner city with Albert Park visible bottom left and the Downtown/Point areas bottom right.

The Durban Beachfront lies where the warm Indian Ocean meets the CBD. The strip's development from a 19th century colonial trading post to the vibrant seaside space it is today, is the subject of CHAPTER 1, which brings together a variety of graphic material to recreate a visual narrative of this unique place and its rich history. The area declined in safety and physical condition during the first decade of democratic rule, but a huge infrastructural investment in the lead-up to the 2010 Soccer World Cup (WC2010) upgraded the back-beach areas and added a long, uninterrupted public promenade. This promenade now covers about 8km, stretching northwards from the harbour mouth to the Umgeni River estuary. Today, the Durban Beachfront promenade is arguably the country's most inclusive public space, which "people come from mansions and shacks" to enjoy together (Ardé 2020).

Durban sociologist Imraan Buccus describes the "all-round sense of ownership" attached to the promenade, and its power to flatten class lines so effectively that, he suggests, a government "obsessed with social cohesion" would do well to study its success (ibid).



Fig. 3: Demographic dot map of Durban Beachfront showing residential distribution of the four main race groups (Census 2011). The western boundary of my study area shown in blue.

Not only is it "the best-constructed, best-managed and most impressive public space anywhere in South Africa", but its social value is priceless (Buccus 2017). The promenade is central to the economic dynamo that is the Beachfront, and the long, narrow built area under study (3.5km long and an average 200m wide) creates a variety of spatial conditions along its western boundary with the city.

A critical mass of historic (White) residents remained on the Beachfront after the GAA was dismantled, and new residents have since moved in. With little modification, the buildings themselves adapted quite readily to the transition. A product of incremental, ongoing change, the area has arrived at its current 'mixed' situation as a result of socio-economic forces, without any express directives from authorities, and in the absence of any laws, policies or initiatives engineering this end. This richness, racial and cultural diversity and level of socio-economic integration is precisely what makes Durban Beachfront worthy of study.

Research Questions

The OBJECTIVES of this study are twofold.

- To document the area by creating and presenting a rich picture of these high-rise blocks of flats as they stand, the neighbourhoods they comprise, and the people who live here (circa 2018)

- To synthesise quantitative and qualitative data gathered from resident interviews and translate it into a model that describes how integrated, just, vertical living could look, feel and work

The following is the overarching RESEARCH QUESTION:

How might the residential high-rise be leveraged as an instrument of justice to foster socio-economic and spatial integration, address housing inequality and catalyse the renewal of urban neighbourhoods?

The following SUB-QUESTIONS shaped the inquiry:

- Who lives in the high-rise buildings on Durban Beachfront, and why?
- What variety of physical conditions exist here at unit, building and neighbourhood scale, and how have spaces adapted to modern usage patterns?
- What quality of life do these buildings deliver, and how do residents experience and feel about their living environments and neighbours?
- Can satisfaction be linked to building design and/or a unit's position relative to the ground, other residents, or the surrounding context?
- To what extent do these dwelling clusters constitute vertical communities, and what pro-social spatial or organisational configurations can be identified that encourage integration with other city-dwellers and the neighbourhood?
- Finally, how might a more responsive, equitable high-rise block of flats look and work in this context?

Theory, Literature and Architecture

CHAPTER 2 introduces the theoretical underpinnings of this research, which hinge on spatial justice. The chapter begins by tracing the history of urban inequality and the way this maps onto 3D city form with respect to residential space.

The late-19th century works of Baron Hausmann in Paris and Charles Booth in London introduce the birth of social housing in the UK—perhaps the earliest example of State-supported residential segregation by economic status. Discussions around the roots of urban inequality in Africa touch on the work of Henry George, and introduce Jane Jacobs, author of *The Death and Life of Great American Cities* (1961). The link between trust, inequality, personal safety and human flourishing is revealed in the ways difference is negotiated in dense urban settings with unequal population groups. This is key to urbanist AbdouMaliq Simone's (2004) proposition that acting co-operatively generates social capital, causing groups to behave much like infrastructure, plugging gaps that arise in physical city systems and processes. Adopting an anthropocene lens, this suggests that despite our state of impermanence, our adaptability and potential for synchronicity can serve to bolster urban resilience. This shifts the way of thinking around the urban commons, especially in southern cities today where solidarity can deliver "remarkable and timely" results one minute, ensuring recalibration in the face of "macroeconomic shocks and ineptness", and simply vanish the next (Simone 2016). In the search for new architectural forms, it is crucial to recognise the plurality and contradictions present in African cities, and embrace the ambiguous yet powerful 'we'—one "that is always fuzzy, shaky, hard to pin down, always broken, but also resounding" (ibid).

Moving on to the Lefebvrian notion of the Social Production of Space, I delve into the Right to the City and share some examples of how this, along with its complementary rights, is reaffirmed in cities today by progressive policies and development mechanisms.

The antithesis of the term 'spatial justice' is injustice, plainly discernible in the fragmented fabric of South African cities. Four decades of enforced racial segregation affected not just the physical form of cities, but the entire structure of society. In the aftermath of apartheid, the State drive to produce low-income housing led to the widespread construction of small, identical, freestanding houses on greenfield sites, but a decade later the housing backlog was still increasing, with informal settlements growing instead of shrinking (Marx and Charlton 2003). This low-density, horizontal approach to development was inefficient and further segregated city space, suggesting quite early on a need for spatial planners to reconsider their approach to residential densification urban verticality. In parallel, the private sector fully embraced the building forms of late-20th century capitalism—the suburban mall, office park and gated housing estate—and the result further polarised the 'haves' and 'have-nots', deepening spatial segregation and reinforcing the mapping of house form onto social class.

Residential mobility has since consisted primarily of non-Whites moving into inner city and suburban areas, occupying spaces that came available following 'White flight', where Whites emigrated or moved to newly developed suburbs further from city centres (Malala 2019). While most inner-city residential areas quickly 'tipped' in racial terms, the inner suburbs today are statistically the most racially integrated areas in the country, inhabited by middle and upper-middle class people of all ethnic backgrounds (Anon 2016).

But to what extent does this integration constitute mixing at the broader level? Low-density suburbs by nature discourage neighbouring, not due to dispersion or house form but rather as a result of car dependency (Freeman 2001). At these densities, does integration really imply mixing in the traditional sense, where relationships are based on meaningful contact? Or does it imply a side-by-side approach to neighbouring (van Leeuwen 2010), by which we live alongside others who are different from us, yet prefer to invest in pre-existing social networks?

At high densities, the very act of living together for prolonged periods de-emphasises differences in race and class. This becomes clear in areas like the Beachfront where new urban communities coagulate across lines of generation, religion, economic status and skin colour. We see here the social *de*construction of difference: lived experience disproves internalised convictions that we are inferior or superior to others, destabilising the acceptance of this as an objective truth and undermining the age-old idea that human superiority is somehow linked to outward physical features (Trivedi 2020).

In recent years, research has revealed the nature and extent of global inequality and its impact on our lives (Wilkinson and Pickett 2009). Coupled with this, a growing consciousness about climate change, the interconnectedness of human and earth systems, and the need to engage in behaviour that is kind both to people and the environment, has ignited interest in the shift from individualistic to communitarian ways of living (Maak 2015) as well as new ways of thinking about the ethical city and the role of the designer therein (Sennett 2018). To this end, a variety of urban housing development modes—old and new, public, private and hybrid—are studied in CHAPTER 3.

Having identified a disconnect between the private and public sectors in local housing production, and with integration as a goal, it is likely that any normative outcome will need to incorporate State-supported housing alongside market-rate offerings. As such, the chapter begins by summarising the range of State-

supported housing types available to the lower economic tiers in South Africa—a snapshot in time of a landscape that has changed significantly in the few years this research was being undertaken. Most encouraging are new, taller developments displaying higher densities, piloting the modern mixing of land uses and income brackets.

Recent times have revived various forms of collaboration, trans-sectoral partnerships, and cross-subsidisation. Newer housing iterations recognise non-traditional family units and household makeups as well as the need to lower the consumption of resources, including space. Here I seek to identify places, processes and built forms—not always high-rise, but always urban—that combine to transgress traditional hierarchies and challenge the binaries we often take for granted: individual/collective; in/out; open/closed; public/private; us/them; mine/ours.



Fig. 4: Toshkov's 2012 *City in the Sky* depicts giant, lotus-like structures soaring over London. Visionary work lets others, whether politicians or miners, imagine future living modes.

The time is ripe, I posit, for a user-centric approach to the design, development and operation of local inner-city housing environments. But how might such a residential building look and function? Reviewing the relationships between high-rises and their occupants, I identified three key separate but intrinsically linked qualities such a building must possess: verticality, density and diversity. These will be examined in detail in CHAPTER 4.

The enquiry into verticality begins with the evolution of tall buildings, and their relationship to structures of power and privilege. Establishing some working definitions is prerequisite to a look at the more technical aspects of form and function: the typologies, components and workings of a residential high-rise. This section is largely dedicated to discussing the suitability of this building type for human inhabitation, especially following the 20th century's failure of mass social housing. "The high-rise was the form to which a tightly scripted story of the life and death of the monster of modernist planning and architecture attached itself" (Jacobs 2006). Tall buildings were believed cause evils ranging from isolation and depression to suicide and criminal behaviour, stigmatising both the buildings and the people residing in them (Hanley 2012). The architecture was blamed for what we now know was something very different: a specific form of residential segregation, namely the clustering of low-income residents in configurations and densities incompatible with real life (Jacobs 1961). Despite Jacobs' disdain for Modernist, car-based planning, large-scale development enacted by "cataclysmic money", she is unique among her contemporaries in that instead of condemning residential high-rises, she likens their circulation spaces—lifts, stairwells and passages—to vertical 'streets' that are subject to the same needs as horizontal ones: active use, passive surveillance and thresholds that support 'real life' in all its messiness (ibid).

Most studies carried out in the '70s and '80s compared similar populations in buildings of different heights, investigating a single demographic group in relation to one aspect, for example mental health (Gifford 2007). Breaking the mould, doctoral scholar Elizabeth Mackintosh investigated the meaning and effects of high-rise living for middle class families in Manhattan, comparing the dwelling experience of adult residents in differently designed and managed buildings on both project and non-project sites. She distils her findings into practical guidelines for the environmental design of high-rise dwellings, so her work is afforded considerable attention here.

The next section investigates urban density at three different scales: that of a city or district (population density), neighbourhood or plot of land (residential density), and the individual dwelling (indoor density).

The post-industrial revolution's city growth and densification led to torrid living conditions for the working poor, giving rise to new, philanthropic approaches to housing and city planning. However, given the prevailing antipathy of the time towards density and big cities, the ideas that found their way into mainstream planning did more harm than good. This is what Jacobs dubs "the most amazing event in the whole sorry tale: that finally people who sincerely wanted to strengthen great cities should adopt recipes frankly devised for undermining their economies and killing them" (1961: 21). Based on years of engagement with the people and places of New York City, Jacobs recounts how urban life plays out in differently-organised, designed and occupied city neighbourhoods, and from her, we learn the importance of residential density to city vitality.

Most influential on built form and also the easiest to calculate and compare, the middle density measure

is discussed in sufficient detail here to lay a framework for interpreting current plans for future densification and development in Durban's inner city—eThekwini City Density Strategy 2013 and eThekwini Inner City Local Area Plan 2016—and later contextualise this study's findings.

Indoor density differs greatly with location, culture and relative means, and it has significant impact on the experience of dwelling in a high-rise. While overcrowding in the home is evidenced to cause negative effects, personal and government thresholds vary enormously around the world. Indoor density is further incredibly difficult to pre-plan, or control post-occupation. In documenting indoor densities found on the Beachfront today, I seek to establish what is deemed acceptable in the local context and translate that into spatial parameters such as flat sizes and occupancy limits for new projects.

Diversity—a trickier quality to define and quantify—is a characteristic of all big cities, as homogeneity of form, function and inhabitants is all but impossible to maintain over a certain size. Indeed, says Simone (2016), "cities need to be full of diverse things", but to maintain equilibrium in volatile urban environments, such diversities must have a way "to exist (at least partially) without differentials of force or value". Also an advocate for diversity, Jacobs (1961) argues for a mix of functions at building and neighbourhood scale, to attract users at different times of day and help keep places safe, vibrant and economically sustainable.

Particularly in high-density environments, how we perceive neighbours who differ from us, and how much we trust or fear unfamiliar others, has a considerable effect on the dwelling experience. The notion of community has many different interpretations, some of which are examined in this section as background to contextualise the kinds of social clusters found on the Beachfront today. Relevant here are studies exploring the extent to which individual residents are likely to develop social ties both within and between individual high-rises, and how the formation of such ties is encouraged by certain spatial features and configurations. The Mackintosh study (1982) enquired into the social relations between residents in single high-rise buildings and massive high-rise housing complexes, but detailed research into the social interaction between socio-economically diverse individuals in high-rise environments is difficult to come by.

In the US, I review some examples of mixed-income housing constructed in the 1990s and designed to ease poverty by placing lower and higher-income families in the same development. There is much to be learned here about what works when fostering the growth of individuals and communities across lines of difference.

Finally, we return to South Africa for Alan Morris' study of racial transition in Hillbrow (1999), a high-rise, inner-city Johannesburg neighbourhood, in the years immediately preceding and following the change of government. This account of processes and user perspectives on organic residential mixing in the local context is shaped around a large empirical dataset, and lays a foundation for interpreting the findings of the present research.

Approach to the Research

As a Built Environment dissertation, the basis of this work is spatial, but it borrows heavily from sociology, environmental psychology, and urban geography. The methodology combines quantitative and qualitative research, seeking to capture, analyse and learn from the totality of the urban dwelling experience and its operational nuances.

CHAPTER 5 lays out the research methodology. Given the huge variety of conditions and resident populations found on the Beachfront, it was decided that the field of study should include the length of the strip where residential buildings meet the shoreline. This area is roughly 3.5km long and between 100m and 300m wide. Tackling such a large area necessitated an open-minded approach to the fieldwork, as data collection was via self-administered, questionnaire-based interviews inside respondents' flats.

The aim was to record the dwelling experience at four scales: 1) individual, 2) living unit, 3) building and 4) neighbourhood. I recruited participants via mixed methods, and after 11 months of fieldwork had carried out 101 interviews of people aged 18-85, living in 51 different buildings. The resulting dataset combined empirical and ethnographic data which needed to be captured, processed, analysed and interpreted using mixed methods, some well-established in sociological research and others more experimental. After drafting up the findings, the conclusions and recommendations from each spatial level were summarised into a set of design guidelines—a *Pattern Language* (Alexander *et al.* 1977) or what I have called a 'Shweshwe quilt'—to inform a new model of spatially just high-rise housing. Born out of the specificities of this particular South African condition, the role of the model is multi-fold and has embedded within it certain contradictions. It serves simultaneously as a heuristic concept with which to analyse and speculate on urban life, and as an inductive output of the research. Importantly, it must accept its own limitations within a research paradigm that aims to advance a relational understanding of urban life, in which something cannot really be known in advance of the relations it generates. The model does not seek to dictate but rather to inform, suggest and inspire.

This work does not present the Durban Beachfront as an ideal scenario to be replicated elsewhere. It is, instead, one Architect's attempt to grapple with what

it means to dwell in a particular urban condition in a state of intensive multiculturality, and to combine the findings from the fieldwork with existing professional skills, to suggest how our cities, through better design, development and urban management, might be rendered more equitable, liveable and humane.

Structure of the Findings

The findings of this research start with the individual, and expand through three subsequent spatial scales: unit, building, and neighbourhood. The emic perspective reinforces the people-first (as opposed to space-first) approach, allowing the reader to develop and expand upon a narrative through successive chapters that inform one another. The writing style aims to be concise yet descriptive, with enough detail to hint at the enriching and intensely personal experience of the researcher.

To demonstrate the variety of conditions present in this limited geographic area, my approach was to illustrate a particular aspect by contrasting more unusual cases. In some instances, it is prudent to include a 'most commonly occurring' example, but distilling the information into a typical or generic case would risk invalidating these findings. This was the kind of thinking adopted by the original designers of these buildings: Modernism, or the International Style, was a 'one size fits all' approach to city planning and human habitation that celebrated order, structure and sameness and, thanks to the automobile, a bigger/better/faster approach to life. This was fine for a population largely homogenous in age, culture and lifestyle, but is less fitting in today's context, one characterized by inequality and pronounced heterogeneity set in a fragile, overstretched ecosystem. Yet in the face of such transformation, Durban's inner-city built environment has remained largely frozen.

Architects—no longer revolutionaries and now all but excluded from the process of what has come to be called 'human settlement'—watch from the wings as the abyss between them and the people they are here to serve widens. This work is an attempt to bridge that gap, to examine the day-to-day lived realities and translate local knowledge into a new model for a residential high-rise that fosters sustainable integration on three key fronts: social, economic and spatial. The stories of those interviewed for this study take centre stage and inform empirical findings wherever they are seen to influence points of view, behaviours, or ways of inhabiting.

CHAPTER 6, with a large ethnographic component, reveals more about the people who live in these blocks of flats, their demographic profiles (gender, age, race, religion) and self-identity. Participants were asked about their family and upbringing with respect to childhood house form(s), how long they had lived and planned to live on the Beachfront, and their reasons for doing so. Information gathered about education levels and occupations helps detail the types of people who find the Beachfront to be an attractive and accessible housing option.

Residents' satisfaction with their home environments is examined to see which factors influence their living experience, and a look at those who are less satisfied offers some valuable insights.

CHAPTERS 7 and 8 concern themselves with the individual dwelling unit or flat: the space we call home—or not.

The first collates the empirical data pertaining to the unit: floor area and number of bedrooms, and the number of occupants and their relationship to one another. These figures are used to calculate the indoor density of each unit, and selected floorplans help illustrate how the space is inhabited. Density is viewed in relation to household income data, satisfaction levels, and other possible correlates, including the type of tenure (owned or rented) and market value of units or their monthly cost to tenants. We investigate how individual units are secured, as well as households' parking arrangements.

The second chapter covers the spatial experience of dwelling in one of these flats how it changes with verticality as one gets further from the ground and horizontally depending on where it is situated on any given floor, both in relation to other units and to climatic factors like sun and wind. A look at the individual rooms and spaces of the home—bedrooms, bathrooms, kitchens and living areas—and how they were originally configured, later modified, and are currently inhabited, provides qualitative clues for designers who are serious about crafting containers that support contemporary living across a wide variety of lifestyles and cultural expressions.

In CHAPTERS 9 and 10, the building is considered first as a physical object (a composition of bricks and concrete) and then as a container for human habitation (a collection of intertwined lives, behaviours and experiences).

Chapter 9 explains why these buildings look and function the way they do and is a foundation for assessing how well they have adapted, through physical modification or in their occupation, to today's needs. Data pertaining to building size—plot area, number of floors and number of units—is combined to indicate the range of existing net residential densities present, and parking provision is calculated per building to see what implications this might have. Selected buildings representing a range of densities are graphically illustrated together with short profiles, and compared to establish what density looks and feels like in practical terms.

After expanding on the area's residential property ownership structures, I turn to building management. How a block is run influences every aspect of daily life in a high-rise, from the condition of the edifice and its

infrastructure to the makeup of the resident population. Management is examined objectively from the researcher's point of view, and subjectively by resident ratings. Procedures for entering, exiting and circulating around buildings are reviewed, as are their shared utility areas. The chapter closes with some residents' perspectives on the condition and maintenance of their blocks.

Chapter 10 explores the social landscapes found in these blocks, capturing a variety of different social configurations supported by high-density multi-family housing. Where possible, data is related back to building design and management to establish whether certain features or ways of operating can be observed to encourage or discourage neighbouring. By enquiring into greeting behaviour, borrowing and helping behaviour, and friendships, I explore how individuals who are often dissimilar in age and background relate to one another, and how they feel about those who share their living environments.

Finally, by examining examples of dedicated recreational and communal spaces and their use, it is possible to imagine how purpose-built semi-private areas like gardens, meeting areas, games rooms and laundries might encourage participation in the sharing economy, foster socio-economic integration, and support the exchange of skills, knowledge and culture.

CHAPTER 11 presents the data gathered at the broadest spatial level of study: the neighbourhood. After offering different understandings of the term 'neighbourhood', I further contextualise the findings by identifying five zones within the study area and describe the urban character of each.

Beginning with locational aspects—which have the greatest impact on resident QoL—we study the area's defining feature: the seaside, which includes the ocean, promenade and back-of-beach amenities. The benefits of unlimited access to nature and to free, high-quality public space are shown to be all but matched by how conveniently the Beachfront and its amenities can be reached both by public and private transport. Mapping the 'convenience circles' of participants—how they travel, and how far they go to reach the things they need—captures the spatial component in empirical terms and gives a holistic sense of the various lifestyles present here. The many positives of living in a well-connected, well-provisioned urban area are seen to be tempered by lesser (but not insignificant) negatives: holiday times when visitor numbers soar; and the many invasive sounds in denser, mixed-use areas with high concentrations of commerce and entertainment. Here we discuss the sources of unwelcome noise and their impact on residents, and identify common coping strategies.

Important to this narrative are the pressing urban issues falling under the banner of 'crime, grime and urban decay'. Understanding that these three are linked to the social issues manifest in the public realm, I chose key themes to better understand their root causes, and how they impact residents and the formation of neighbourhood social ties (NSTs).

Discussions around the Beachfront's homelessness lead into one around street crime, which covers everything from the pilfering of vehicle parts to violent muggings. Data gleaned from incidents reported by respondents is presented in relation to each of the five zones. Research reveals how, in reaction to crime, informal protection networks—their strength correlating with the severity of criminal activity in the immediate vicinity—have sprung up all over the Beachfront.

Urban decay is a blanket term for the physical and economic deterioration of a city neighbourhood but also refers to a reduction in its perceived safety and desirability as a place to live. This is discussed under two headings: Urban Slide, which covers problem buildings and commercial disinvestment, and Urban Management, which looks briefly at the two Urban Improvement Precincts (UIPs) operating in the study area, and their effectiveness (or not) at tackling the aforementioned issues. This section also covers grey areas where informal economic activities and recreational behaviours conflict with residential use, and where the Right to the City and the use of urban space is contested.

Lastly, the chapter looks at what is not found—or not found enough—in the study area, and participants identify missed opportunities and underprovided facilities. These absences can be viewed as opportunities: urban scale gaps to be filled with integrated, responsive, responsible architecture. Firming up the vision for this proposed new type of building is the task of CHAPTER 12.

Towards a Model

The concluding chapter shifts from the descriptive and analytical to the normative.

Part 1 summarises the conclusions drawn from previous chapters, elucidating how they practically inform the proposed model.

By way of final recommendations, Part 2 presents a set of design guidelines for the model. Starting at the macro level and then zooming in, I propose how a more spatially just high-rise might be commissioned, designed, constructed and operated in this context.

Forty years on from the publishing of *A Pattern Language* (Alexander *et al.* 1977), this study revisits a user-centric approach to examining and intervening in cities, in an effort to derive design-level theories and tools relevant to this place and time. Guidelines touch upon relevant aspects of the proposed model, from the collective client to the building's identity and connection to the public realm, to its strategies for circulation, security, parking and servicing. Recommendations call for light, airy spaces and open areas, no matter how small, that support human health, productivity and wellbeing—physical,

emotional and spiritual. Guidelines are written simply and informatively, including enough descriptive detail for the reader to envision how this new place might look and feel.

I believe architecture brings with it a moral responsibility to society, and a good residential building can do so much more than just keep people safe, warm and dry. It can fulfil its inhabitants' need to be close to nature and other humans, and at the same time inject new energy into a neighbourhood by offering new uses and opportunities. It is important for new residential buildings to respond adequately to current needs such as parking, or the safety of residents and their belongings, but they must also anticipate sweeping future change: a district under one metre of water; life without the automobile; a world where we are confined to our homes because of poor air quality or pestilence or must either grow our own food or starve; or more optimistically, a shift in governance and economic systems that eradicates mass conflict, drastically reduces inequality and eliminates the need for perimeter walls and security guards in cities.

The pioneer buildings of the brave new world must not only be able to look after their own needs and those of their inhabitants, but also have a duty to do so ethically and equitably. To Vitruvius' *firmitas, utilitas* and *venustas* (firmness, commodity and delight) I seek to add *iustitia*: justice.

Chapter 1:

Making the Golden Mile

A history of residential development on the Durban Beachfront

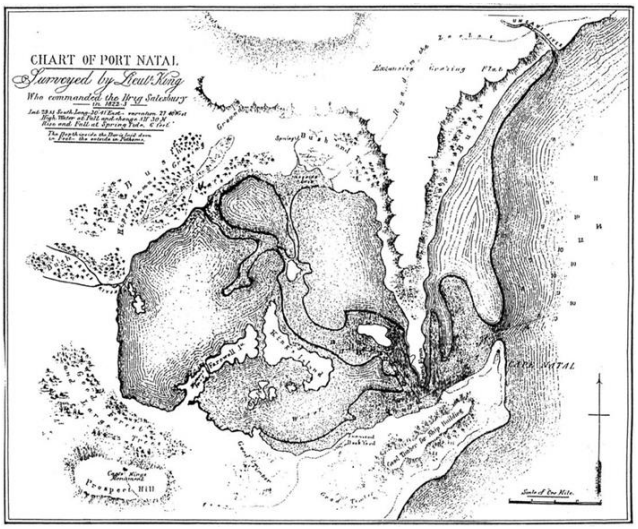


Fig. 5: Lieut. King's chart of the Bay of Port Natal, 1822-3.

> "Buildings and towns enable us to structure, understand and remember the shapeless flow of reality and, ultimately, to recognise and remember who we are. Architecture enables us to perceive and understand the dialectics of permanence and change, to settle ourselves in the world, and to place ourselves in the continuum of culture and time."
> (Pallasmaa 2012: 71)

'Place', according to Christopher Alexander *in The Timeless Way of Building*, is a quality established primarily by non-professional users of space. It makes people feel vibrant, alive and unselfconscious (cited in Park and Newman 2017). As Pallasmaa says above, place is far more than a collection of horizontal or vertical planes: it is fluid, personal, and open to interpretation. Home, where our most intimate moments are spent, holds special meaning: "Our domicile becomes integrated with our self-identity; it becomes part of our own body and being." (ibid: 72)

Durban's shoreline has been home to many for a little over 150 years, and the coming pages follow its physical development, starting from its beginnings as a wild stretch of sand dunes. The story of these residential high-rises, their precursors and the socio-political milieu that produced them, lays a firm basis for interpreting the findings of this research.

In May 1824, English traveller and trader Henry Flynn arrived in Port Natal to set up a trading post which would be the region's first European settlement. The previous year, Farewell and Lieutenant James King had identified Port Natal as the only viable harbour for berthing ships on the 1200km stretch between Delagoa Bay (Maputo, MZ) and Algoa Bay (Port Elizabeth/Nelson Mandela Bay), cementing the location's maritime importance.

The City Hall now stands on the site chosen for the first cluster of buildings. Given its strategic position near the harbour, this area became the epicentre of Durban's modern CBD. The early swimming beaches were at Congella, near the *Voortrekker* (Afrikaner) settlement, and in 1857, harbour pilot George Archer built the first timber bathing house, a stilted structure set about 50m off its northern shores. 'Back Beach', a stretch of ocean dunes dunes popular for horse riding and daily walks, was used at the time by couples seeking privacy, and by stick-fighting Zulu youth (Frescura and Maud-Stone 2013).

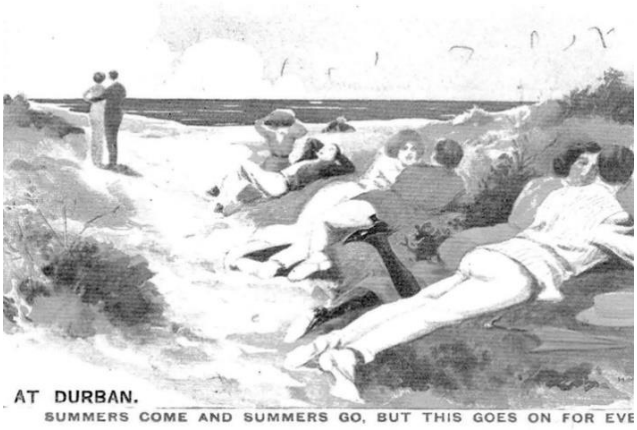


Fig. 6: An old postcard of couples in the Back Beach dunes.

The earliest mention of a residential settlement at the Point—the narrow spit of land where the ocean beach extends south to meet the harbour mouth—dates to the mid-1860s. Kearney's (2002) account of its development is summarised as follows:

In 1873, a report described an Amatonga village sited not 50m from Point Police Station. This village housed around 300 immigrants who worked as labour for various port functions. European settlers arriving and relocating from inland, and the arrival of both Passenger Indians (traders immigrating of their own accord) and indentured Indian labourers, brought rapid urbanisation.

The informal settlement grew to occupy much of the valley between Point Road and the Back Beach dunes, and became known as 'Bamboo Square'. Houses were constructed in a blend of methods: grass and straw huts; cottages of wattle, daub and thatch; and lean-tos made of fabric. Constructions of discarded shipping materials mimicked the settlers' prefab kit houses. The Council grew increasingly concerned about "the Native and Indian Cantonment at the Point" with respect to poor sanitation and waste practices, overcrowding, the fire threat, and the prevalence of "nuisances". Here, a police report from 1880 describes Bamboo Square: "I find 133 dwelling-houses or huts erected upon the occupied blocks, in which I find sleep some 580 souls, as follows: 6 Europeans, 26 St Helenas, 10 Chinamen, 274 Indians and Malays [and] 269 Natives of all tribes." Residents were typically fishermen, labourers and boatmen. Other occupations included storekeepers, hawkers, washerwomen (*dhoti*) and prostitutes.

In 1879, a new government hospital, Addington, was built just north of the Point. Natal's colonial buildings were typically single-storey structures founded on brick piers with suspended wooden floors, timber framing and corrugated iron walls and roofs, almost always with covered verandas. Photos show that even small houses had covered front porches to shade the walls and aid ventilation. Fifty years on, the inclusion of covered open balconies in multi-storey blocks of flats is perhaps a legacy of these early local housing forms.



Fig. 7: Looking over Addington Hospital from what is now Prince Street, at the ocean, North pier and the Bluff (1897).

During the 1880s and 1890s, the Harbour Board made various attempts to tear down Bamboo Square, provide piped water and toilet facilities, and relocate their railway, military and port workers into barracks. But the settlement continued to grow, and over time Bamboo Square shifted further north, closer to the ocean shore near the Bell Street *Togt* labour barracks.

In 1893, work began on a waterborne sewage system for the town of Durban. Bamboo Square was perfectly situated for the pumping station, though this did not threaten the now well-established neighbourhood.

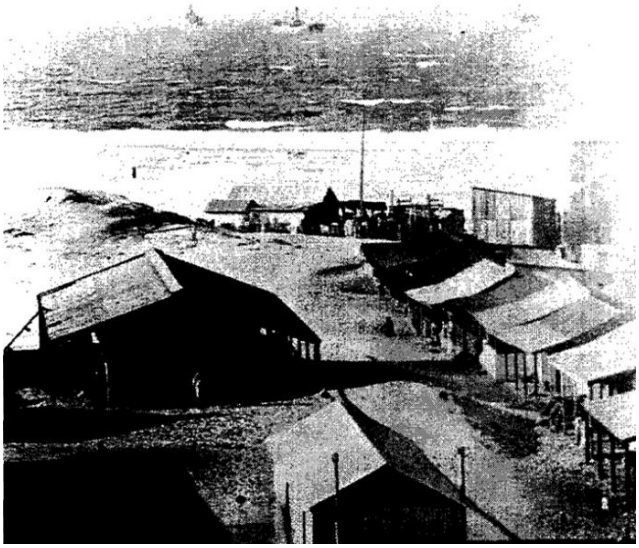


Fig. 8: The Point, looking out to sea (post-1894). The Bamboo Square sewage pumping station and chimney (upper right) is visible, surrounded by the settlement's remaining houses.

Within four years of the plant's completion, the Addington lands, including Bamboo Square, were transferred to the Durban Town Council. Authorities accepted the enclave, and in 1901 began to relocate residents to temporary barracks while their houses were raised and improved. But the Bubonic Plague broke out, stirring anxieties around sanitation in the settlement, and when an Indian worker at the plant died of the Plague in 1902, Bamboo Square was condemned. Its 116 dwellings were demolished in 1903, along with nearly 300 houses in town.

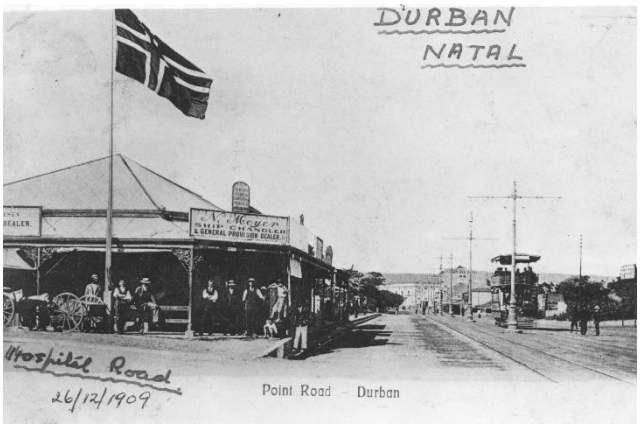


Fig. 9: A postcard from 1909 showing the view down Point Road, towards the Bluff, from the corner of Hospital Road. Visible on the right is an early double-decker electric tram.

Frescura and Maud-Stone (2013) describe how the ocean beaches came to be the focus of tourism and recreation in Durban. By the turn of the century, the bay's waters were congested, and whaling activities were attracting sharks. In addition to reduced water quality, wharfside activities were cutting the bay off from town, and following the development of the Victoria Embankment in 1902, little bathing space remained. This meant the ocean shore became more attractive, and the railway line's inland extension made seaside holidays more accessible. During the

South African War (1899-1902), refugees from the Witwatersrand fled to Durban and never left. The town became a landing place for Transvaal-bound Imperial troops, and facilities built for military entertainment were later converted for use by civilian holidaymakers.

1 The likely viewpoint for Fig. 7 (over early Addington).

2 The viewpoint for Fig. 9 (down Point Rd).

3 A likely viewpoint for Fig. 8. The houses and smaller plots of Bamboo Square are faintly discernible here in the plan.



Fig. 10: Amalgamated Sewer Plans, 1880s onwards.

Fig. 11: A postcard (circa 1905) of smartly dressed Victorians on Back Beach, with the Beach Hotel in the background.

In 1904, control of the foreshore from the mouth of the Umgeni River to Bell Street bordering the Point, was handed to the Town Council. The first bathing enclosure on Back Beach, a semi-circular structure designed to protect bathers from sharks, was opened in 1907. Here the Rachel Finlayson open-air pool stands today, roughly 500m north of the West Street Beach node. A few years later the Edward Hotel was built alongside the Beach Hotel, reinforcing this as the centre of what would later become known as the Golden Mile. Sand dunes between Marine Parade and the pedestrian promenade were later cleared for paddling pools, gardens, games arcades and tearooms. Little visual record exists of the residential buildings developed along Ocean Beach between 1910 and 1930, as the focus was always on the swimming beaches and leisure facilities.



Fig. 12: A postcard circa 1920, depicting the bathing enclosure on Ocean Beach and promenade (bottom left).



Fig. 13: A later postcard looking back at the changing huts and an earlier version of the Kenilworth tearooms with its fairground attractions. Lightweight timber construction and mock-Tudor style typify seaside architecture of the time.

Durban's first fly-over photogrammetric images were captured in 1932. Frontline buildings had begun to appear south of West Street and as far north as the Old Fort Road arterial. Defined city blocks stand west of Marine Parade, with wild *vlei* north of Somtseu Rd. The Addington Children's Hospital (1928), a notable heritage building that closed in 1980 at the height of the apartheid struggle, is undergoing renovation, has a new modern extension and reopened in 2012.

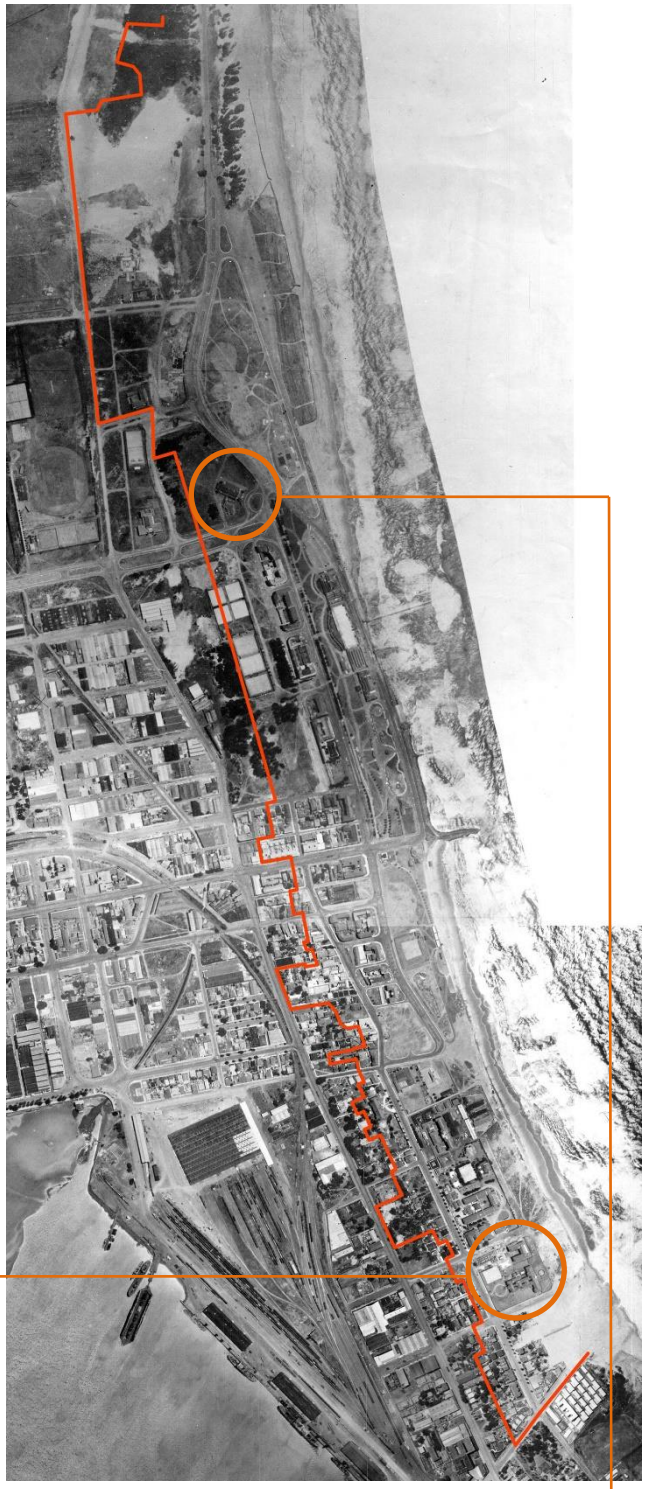


Fig. 15: 1932 Photogrammetry



Fig. 14: The Beach Pavilion concert hall (pictured) burned down in the '30s. Seen here are the Amphitheatre Gardens and the first residential strip in North Beach, neither of which appear in the photogram above. Top left is old Grosvenor Court (1936) and right, Althea Court (1933) dating this photo to around 1938.



Fig. 16: Beach Hurst's (1924) front wing is the oldest surviving residence in the study area. The tower addition dates to 1967

Durban Beachfront's high-rise flats today cover architectural styles spanning the mid-1920s to the mid-1980s, with a gap in construction in the decade around World War II (WWII). The area experienced two distinct building booms: in the mid-1930s, and in the decade from 1958 to 1968. The earlier buildings stand lower, from 7 to 11 storeys (Rydal Mount, Olympic Court) and 13 at most (Ottawa Court), and are sturdy, with remnants of Neo-Classicism overlaid with Early Modern clean lines. Some tend towards Nautical Modernism, characterised by ship-like features, or to Art Deco's rich detailing. Many of these buildings began as hotels, and were later converted to flats by conjoining rooms and adding new wings.

Althea Court (1933) is an excellent example of Art Deco architecture. Wrapping around Somtseu Rd and Snell Parade and with a corner entrance, the symmetrical façade has a 2-storey corbelled plinth with arched recesses and Aztec-inspired patterns, from which rise the vertical plaster bands associated with the style. Ground-floor flats were common, and the front has two small shops opening onto the street.



Fig. 17: The sought-after heritage block boasts generous plans and high ceilings; A 2-storey parkade was added later.

Fairhaven Hotel in South Beach (1935) was once the tallest 'skyscraper' in Durban. The 18-storey slab building has a nautical feel, with horizontal banding, porthole windows and a curved ground-floor wall. Smaller rooms were combined to form larger (two and 3-bed) units, resulting in only three or four flats per floor, making 60 units in total.



Fig. 18: Fairhaven, now a shareblock, was built without parking and none has since been added. Those who need bays rent them in the podium of 10 South, visible on the left.

The Park View Hotel (1939) was set back from the frontline, behind the Edward Hotel and overlooking Victoria Park. Currently a hybrid hotel and retirement home, it has only small rooms and no resident parking.



Fig. 19: A postcard from 1960 showing the Park View Hotel overlooking what at the time were bowling greens. Tucked in behind it is the Hotel Palmerston, now a student residence.

Typically four to six storeys high, most blocks of flats built in the area in the 1940s and '50s had hipped, tiled roofs and the arched balcony openings associated with the Spanish-inspired Berea Style. The photogrammetric fly-over image from 1949 shows the Natal Command military base located just north of the study area. The southern encampment is seen extending into present day North Beach, with the outline of Carpendale Park already discernible. All that remains of Natal Command today is the derelict sea-facing admin building and traces of the old gun battery that lends its name to Battery Beach.

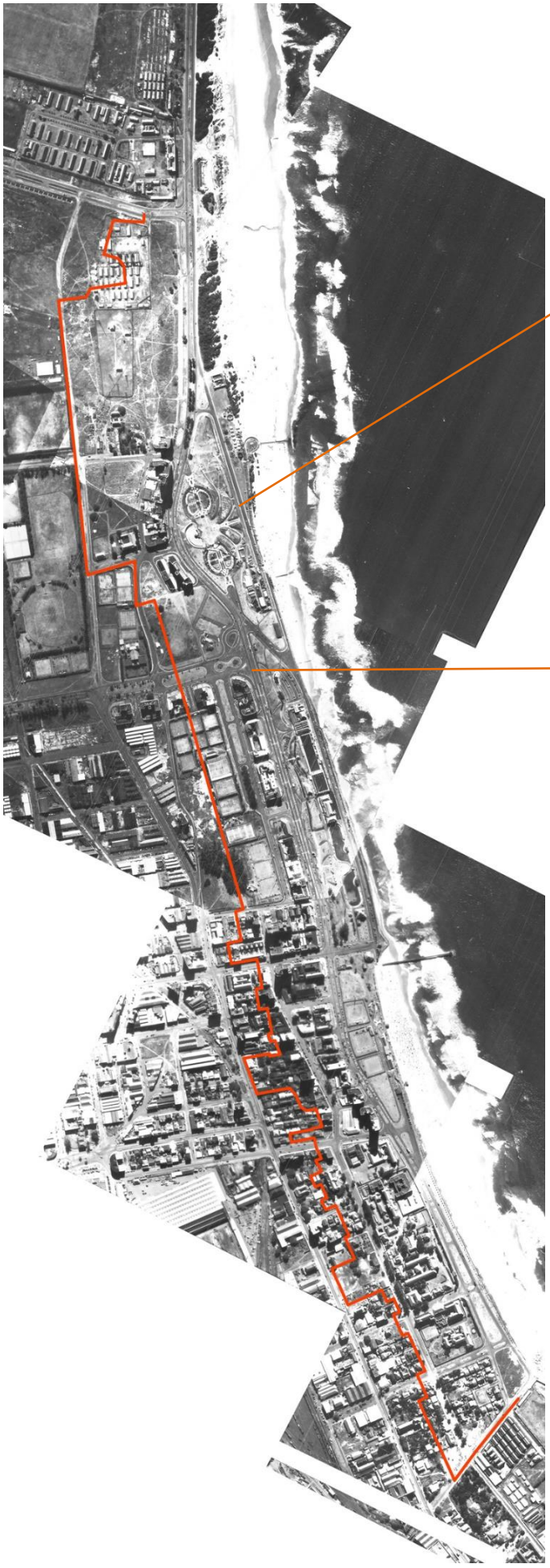


Fig. 20: 1949 Photogrammetry

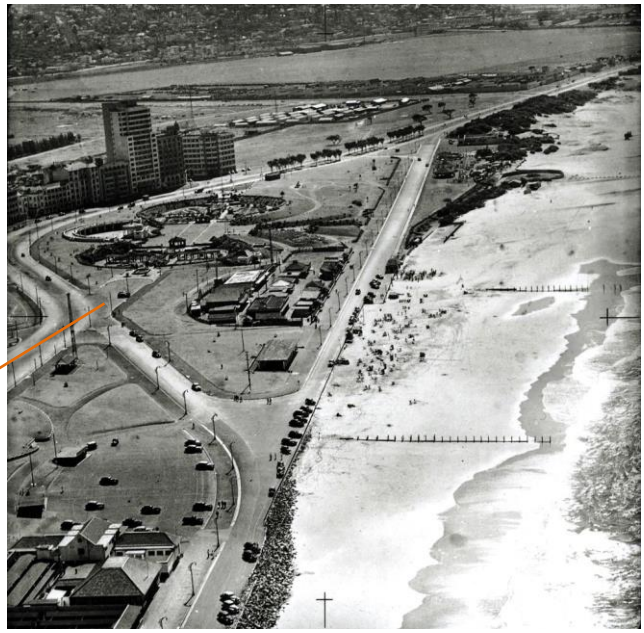


Fig. 21: An oblique view of the amphitheatre and North Beach frontline in 1949. The three visible high-rises (left to right) are Golden Sands, Althea Court and Cumberland.

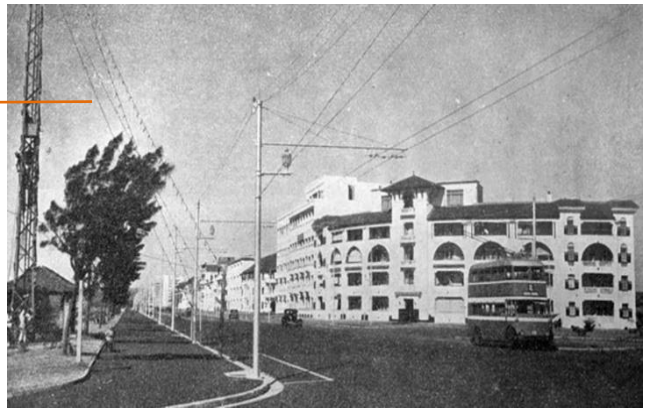


Fig. 22: Looking south from the Old Fort Rd intersection with Windemere flats on the corner. It was replaced in the early '60s by a 14-storey block with the same name and footprint. The photo dates to before or during the war, but after 1935, when electric trolley buses began to service Marine Parade.

Construction in the area resumed after the war, with taller blocks appearing. The first post-war high-rises completed in the study area were the older (south) wing of **Willsborough Mansions** (circa 1947) and its neighbour, the **Rydal Mount** Hotel (1948). Both provided parking, the former in basement and ground-floor bays, and the latter in the multi-storey podium. High-rises from the late '40s and early '50s tend towards elegant, simple Modernism, with clean horizontal lines and minimal exterior adornment. Some boast beautifully detailed entrance lobbies, only a few of which survive.

In the mid-late '50s, a more textured version of Early Modernism emerges: face-brick with plaster panels and protruding window surrounds. These include the **Edenroc** Hotel (1954), **Wendover** (1954), the older part of **Shorelands** (1956) and **Dunelands** (1957), and appear in the Town Plans from the mid-'60s (overleaf).

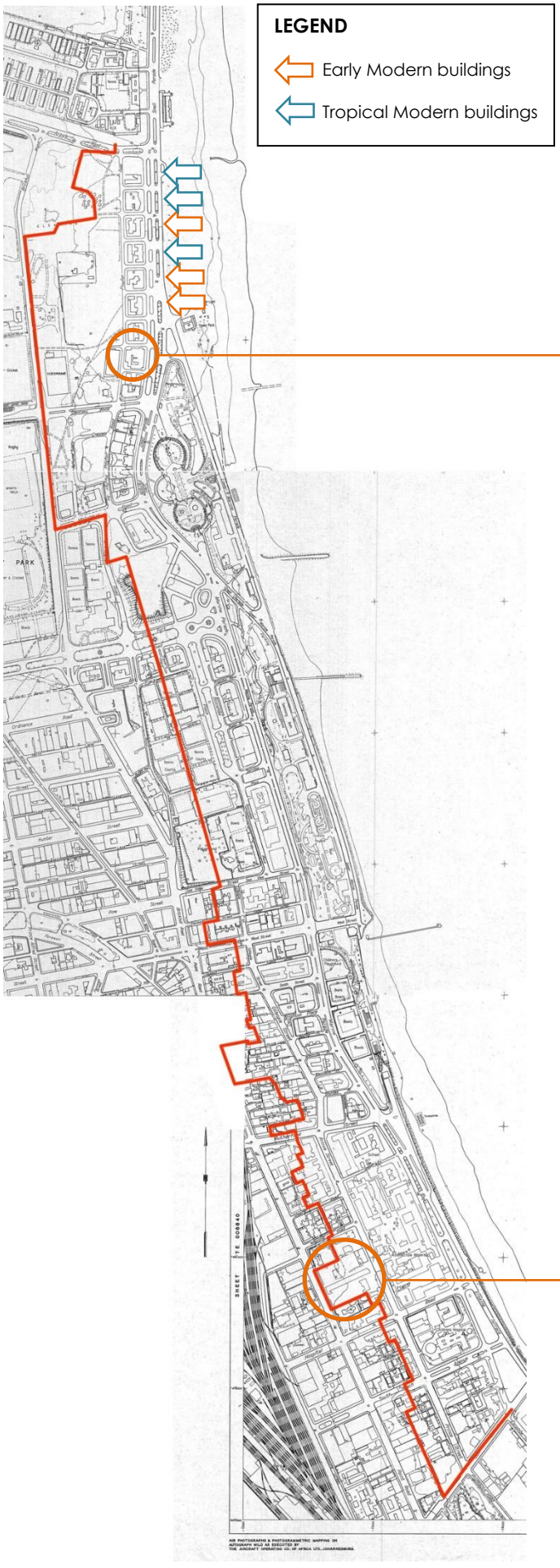


Fig. 23: Town Plans, 1964-65.



Fig. 24: Edenroc, formerly a hotel, is now a retirement home.

The architectural style of new high-rise residential buildings depended on the fashion and the architects, but also the client's taste and budget. Prolific developer Mr F.E. Jiran Esq. commissioned at least five buildings inside the study area: **Blue Waters Hotel**, Bel Aire flats (now a hotel), **Crestmore** (1961), **Northlyn** (1966) and **Carillon** (1962). Together with Claridges Hotel (1955, now Tropicana Hotel), **Las Vegas** (circa 1957), Silversands, Lancaster Gate and **Groote Schuur** (1959), these buildings represent the work of a group of architects—the firms of Crofton & Benjamin and Buck & Whitehead are two—who explored Tropical Modernism, a climatically responsive version of the Modernist style. Their designs featured glass mosaic tiles and patterned ceramics (inside and out), oversailing canopies, clay breezeblocks, oblique angles, zigzags, and gentle curves. Landscape elements such as boulders, water and indigenous planting were incorporated. In the plan on the left, the North Beach frontline is a solo strip of built-up fabric but by the decade's end, high-rise blocks of flats had appeared all over the neighbourhood. The resulting urban form is very similar to what exists today.

In addition to private commissions, Elwyn Court behind Addington Hospital was designed and built by Durban Corporation in 1955 to house sub-economic (White) port workers, and two adjacent North Beach buildings, **Key West** and **Floradoone**, were reportedly constructed in the mid-60s as military barracks.



Fig. 25: North façade of Elwyn Court at the start of research, viewed from outside the building's main entrance in Point Rd.

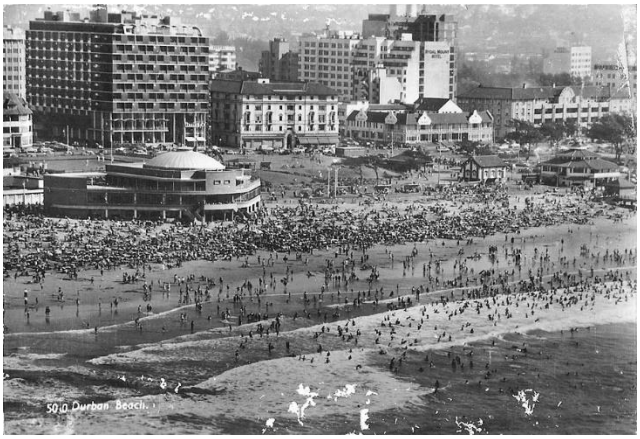


Fig. 26: A late '50s postcard of the West Street node with the Mermaid Lido in the foreground. Above it is Claridges Hotel. On the top right are the Rydal Mount Hotel and behind that the completed Willsborough Mansions (circa 1957).



Fig. 27: A 1961 photo posted by a member of the Gooderson family, who still run hotels today, showing the Lonsdale Hotel (now a student residence) under construction in the foreground. Along the top (left to right) are the Park View Hotel, Willsborough Mansions and the Rydal Mount Hotel.

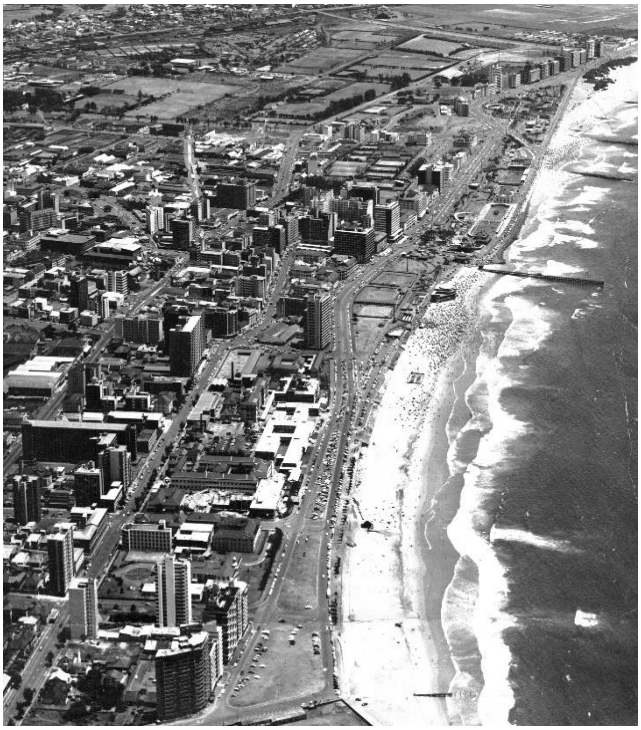


Fig. 28: A 1962 aerial photo of the entire Beachfront; The Addington Hospital towers had just begun construction.



Fig. 29: Looking southwest a few years later from atop the hospital ward tower, past the west stairwell of the completed nurses' home tower. High-rises visible in the middle ground (left to right) are the sides of Carillon and Rapallo and the fronts of Merion Court, Falaise, South Sands and Dolphin Ct.



Fig. 30: South Beach circa 1965 with Mermaid Lido middle right; High-rises in the background (left to right) are Fairhaven with its fluorescent Coca-Cola sign, Art Deco Grandborough Court, and Durban Sands holiday flats, now 10 South.

Throughout the 1960s, local high-rises reflected the International Style, with plain, repetitive façades, flush glazing, and plastered and painted panels. Modelled on predecessors developed for European and US climates, and without the architectural devices needed in the subtropics, most of these buildings today operate by necessity with their façades covered in aircon units and reflective film.

Precast concrete panels appear after 1965, and **Sahara Sands** (1966), 24 storeys, is built entirely in this construction method. The area also has two examples of the style known as Brutalism: Eden Crescent Retirement Home in North Beach (circa 1975), and **Belmont** (1978) on the corner at the West Street node.

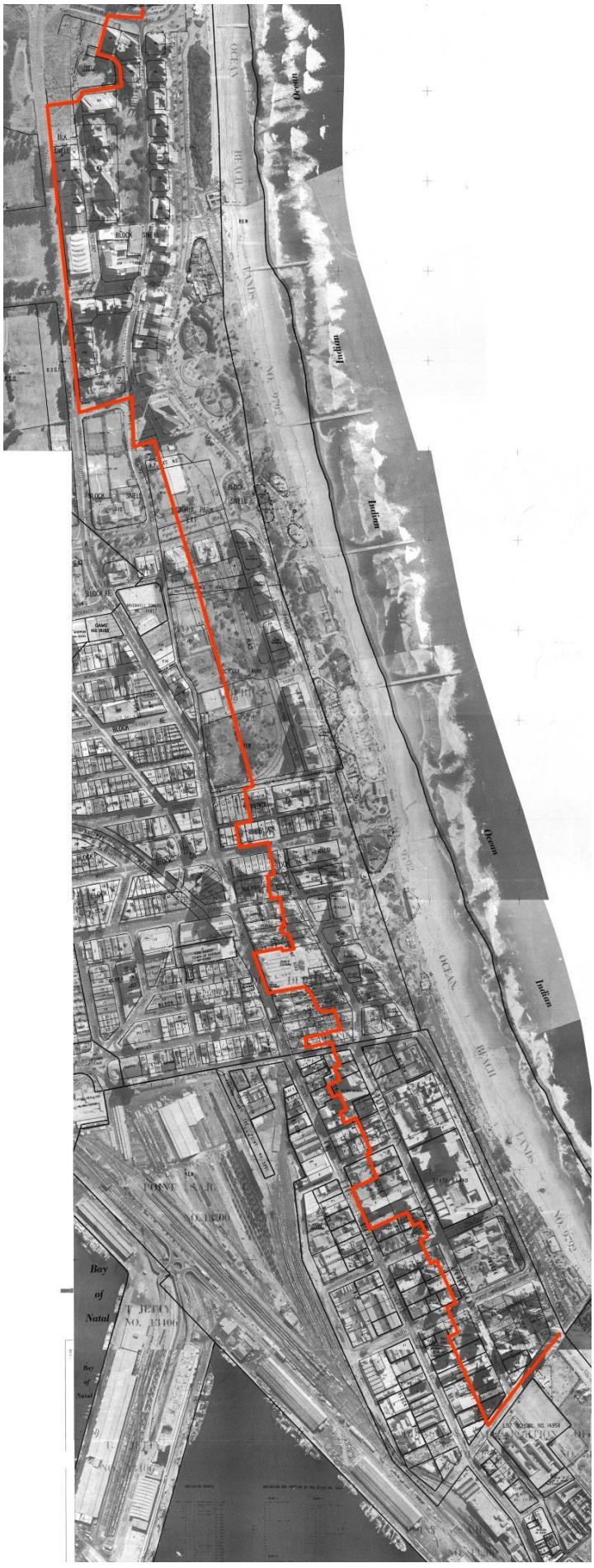


Fig. 31: 1990s Photogrammetric Town Plans



Fig. 32: Previously a Holiday Inn, Eden Crescent is Brutalist in its use of exposed, fluted concrete combined with face-brick panels, and has chunky, Aztec-inspired relief sculpture.

The growth in local and international tourism led to a boom in hotel-building starting around 1970. The first to take advantage of the allowable height were The Malibu (1969; 26 storeys), now the Garden Court South Beach; and the adjacent Elangeni & Maharani Hotels in North Beach (1971; 22 storeys). The Marine Parade Hotel, now also a Garden Court, was completed over a decade later, standing 28 storeys (over 118m).

With most available land in the study area already developed, only a few new high-rises appeared in the '80s. These display the Postmodern architectural style: geometric shapes, lower floor-to-floor heights, and large plaster areas painted in pastel shades. Parking provision increased with car ownership, and later buildings—**Port O Durban** (circa 1980) and **Maldonado** (1982)—were designed with larger (2 to 3-bed) units, each of which had their own secure parking bay.



Fig. 33: In this view from Addington Beach, Marine Parade Hotel is under construction, dating the photo to around 1984.

Beachfront development—beaches, public spaces and recreation facilities—continued through the late 20th and early 21st centuries, including a 5km shoreline upgrade stretching from Rutherford St in the south to

Blue Lagoon in the north. From 1981, guided by Architect and urban planner Revel Fox, the Durban Municipality reshaped the district. Lower Marine Parade was pedestrianised, and the West St node thoroughfare was closed to reduce traffic on Marine Parade. This shifted the northbound arterial road inland, making space for more northern beaches.



Fig. 34: The linked circular paddling pools at New, Wedge and Thekwini Beaches with their playful, oversized follies and water slides are an enduring legacy of the 1980s upgrade.

As apartheid ended, the growth in disposable income and mobility of non-White South Africans, combined with Durban's "lead in the breaking down of racial restrictions and creation of new accessible attractions on the Beachfront" encouraged people of all races to visit (Edwards 1989). By decade's end, the beaches initially designated for separate use according to race were open to all.

The Beachfront's second major upgrade was carried out prior to the WC2010. In the early 2000s, the Beachfront was unsafe and rundown. Businesses were moving their headquarters up north to Umhlanga Ridge, draining capital from the city centre and instigating residential 'flight' from the city into newly-built suburban security complexes.

Before the WC2010 was awarded in 2004, the (now) eThekwini Municipality was planning a Beachfront revamp to link the new Golden Mile 'book-ends' of Suncoast Casino (2002) and uShaka Marine World (2004) with a broad, continuous walkway. This aligned with plans to build a new stadium and link it to the Beachfront, and the award ensured funding.

All non-essential structures and attractions were eventually removed from the foreshore, notably those east of the high-water mark, allowing rehabilitation of the natural shoreline and dune ecosystem. The old Seaworld and Dolphinarium on the West Street node were demolished in 2004, and the area became a large amphitheatre with a beach for hosting outdoor events. Finally, Fitzimmons Snake Park, standing since 1938, was demolished in 2008.

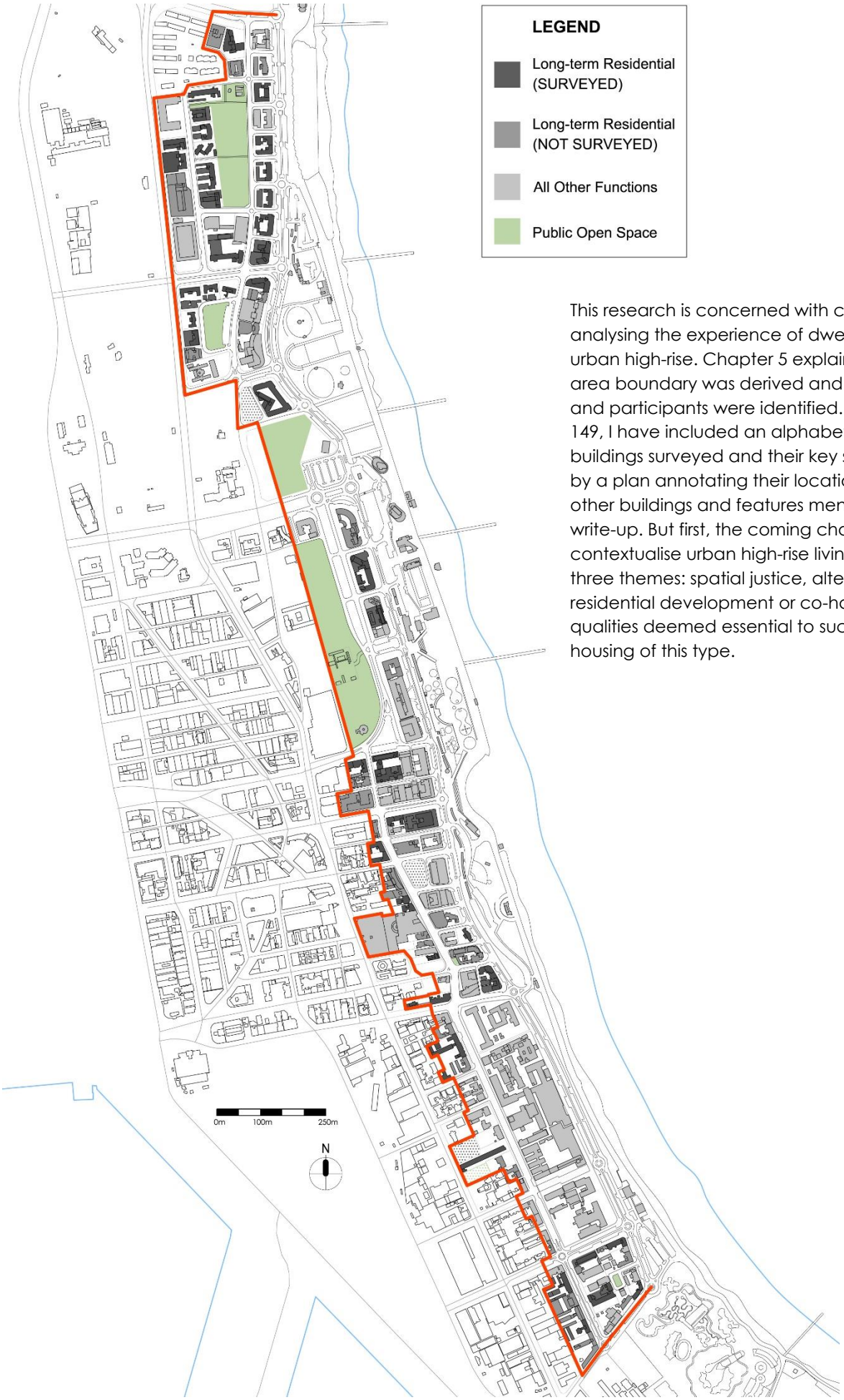
Back-of-beach landscaping was simplified, removing obstacles, earth berms and vegetation to improve spatial flow and open the sea view. Five new restaurant nodes were designed. Two of these nodes—interestingly, those that also house other recreation amenities—have proven very successful: the Circus Circus café, skate park and bicycle hire at Bay of Plenty, and the Marine SLC, surf school/bike hire and Surfriders Café at Addington. But the star of this upgrade is the promenade, a high-quality, unobstructed public space that follows the shoreline uninterrupted. Well-lit and alternating brick paving with tinted concrete, it narrows and widens to respond to spatial conditions and activities on either side.



Fig. 35: The Beachfront and promenade post-2010 upgrade.

During this research, construction was underway on the southernmost section of the promenade, at the Point. Completed in late 2019, it is now possible to walk, run, skate or cycle the full 8km from the harbour mouth to the Umgeni River mouth.

On the following page is a plan of the study area today, its boundary shown in orange. As with all plan drawings in this document, North faces directly up the page and a scale bar is included. Graphically, I have adapted the Figure Ground technique to make clear the difference between built (solid) and open space (void), with shades of grey to distinguish land uses.



This research is concerned with capturing and analysing the experience of dwelling in a coastal urban high-rise. Chapter 5 explains how the study area boundary was derived and how buildings and participants were identified. On pages 148-149, I have included an alphabetical schedule of buildings surveyed and their key statistics, followed by a plan annotating their location along with all other buildings and features mentioned in the write-up. But first, the coming chapters will contextualise urban high-rise living according to three themes: spatial justice, alternative modes of residential development or co-habitation, and the qualities deemed essential to successful integrated housing of this type.

Fig. 36: Plan showing the study area in context today.

Chapter 2:

Spatial Justice and the City

Housing disparity and segregation

> "Thinking spatially about justice not only enriches our theoretical understanding, it can uncover significant new insights that extend our practical knowledge into more effective actions to achieve greater justice and democracy."
> (Soja 2009)

Between 1940 and 1990, South Africa's apartheid government employed Modernist design and planning principles to perpetrate what has been called the largest social and physical planning experiment in history. This 'top-down' system ordered, divided, separated and controlled the populace, giving built form to the regime's vision of an ideal society, reinforcing a narrative firmly rooted in anti-diversity, but which came to encompass anti-verticality and anti-density also.

As Soja suggests above, there is value in thinking spatially about injustices if we are earnest in trying to address them. In South Africa, it is particularly easy to identify the processes of discrimination responsible for producing unjust city geographies. Racial segregation corresponded with segregation based on income or socio-economic status (SES), as Whites were afforded better education and employment opportunities with better earnings (Oelofse 2003: 91). The best locations and most desirable housing were reserved for a privileged minority, and non-Whites relegated to substandard dwellings in peripheral dormitory 'townships'.

Political forces played a big part in creating South Africa's unequal, low-density, fragmented towns and cities (ibid). While 'divided city' patterns remain, today they are defined more by class than race, and new divides have emerged with the recent proliferation of separate, high-income residential and office precincts associated with the neo-liberal agenda (Todes 2003: 113). Such urbanisation patterns are further reinforced by a desire for safety, leading to the development of gated housing complexes for the middle and upper classes, and by the continued preference among lower-income communities to live in a freestanding house on an individual plot (Pieterse 2003: 131). South Africans today typically view detached suburban houses as safer and more desirable than higher density, more central options, while high-rise, inner-city living tends to be viewed as seedy and dangerous.

As an Architect, I seek to understand how the socio-spatial dialectic informs spatial transformation in our cities. Displaying high levels of racial and socio-economic mixing, the Beachfront already builds in spatial justice through diversity, meaningful contact between residents, and access to nature, and there are several spaces here that lend themselves to promoting housing equity and better city access, if properly regulated. Yet little research exists to bridge the gap between decision-makers (authorities, investors, developers and property owners) and the everyday person who, through the course of their daily routine, animates and validates urban space. Challenging the idea that the built environment can be studied separately from those who create and inhabit it, I believe it is instead qualified through the human experience. This study's theoretical and literary investigations follow from the liminal zone where architecture and sociology meet: the no-man's land of the socially constructed space.

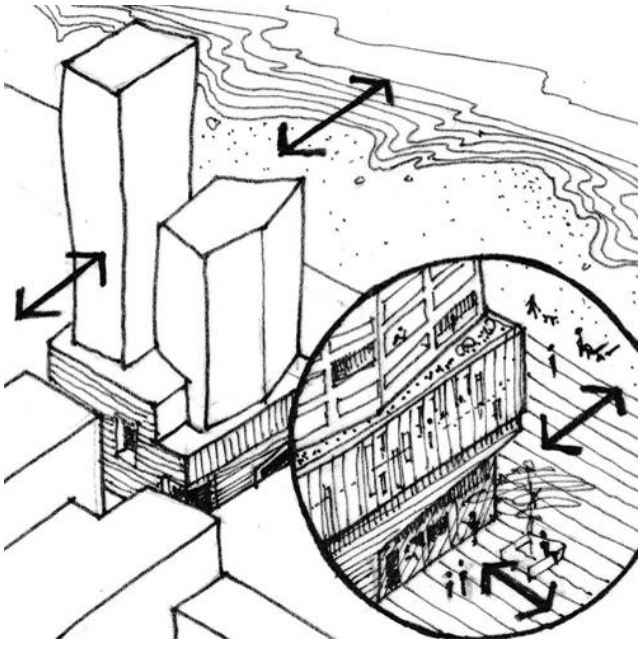


Fig. 37: A diagram of the conceptual approach to the study.

The object of study here is the residential high-rise, and the field of study, the South African inner city—specifically, the area adjacent to the ocean. Using an analytical, socio-spatial lens, with the goal of moving towards a normative outcome, this chapter explores the history, causes and manifestations of urban inequality and its link to city and housing form.

Henri Lefebvre's (1991) triad articulates the social production of space, acting as a springboard to understanding the Right to the City, which is central to the notion of spatial justice. This frames a discussion around residential, racial, and economic segregation, and how its antithesis, integration, might be achieved through interventions in the built environment.

Inequality and City Form

> "The deep inequalities that persist are visible reminders of the effects of apartheid and colonialism. Until these scars are healed, the vision of our Constitution will not have been achieved." (Justice Kate O'Regan 2011)

Socio-economic inequality, measured in outcomes or opportunities, is not unique to South Africa. First colonialism, then the divisive policies of apartheid, multiplied disparities between individuals and households in wealth, access to education, employment and health. But inequality is a worldwide reality.

In 2011, the Organisation for Economic Co-Operation and Development (OECD) reported that the gap between the rich and the poor in their 34 member countries stood at its highest in over 30 years. The most widely accepted indicator of a country's income inequality is the Gini Index, which ranges from 0 (most equal/everyone earns the same) to 1 (least equal/one person earns everything).

The book *The Spirit Level* (Wilkinson and Pickett 2009) posits that the single biggest divider, responsible for most of modern society's ills, is differing access to means by SES or class—in other words, inequality. In studying modern and recent hunter-gatherer societies, it was found that "they maintained equality not only through the institutions of food sharing and reciprocal gift exchange, but also through 'counter-dominance strategies'" (ibid: 208). 'Vigilant sharing' ensured that all received a fair share, and group members would gang up on any who sought to dominate, using "anything from teasing and ridicule to ostracism and violence" (ibid). This is a reminder that considering the accumulation of assets and money as a mark of success is a relatively recent societal construct. Our natural state is of greater equilibrium, where "the selfish desires of individuals for greater wealth and pre-eminence can be contained or diverted to less socially damaging forms of expression" (ibid). It is in our nature, say the authors, to feel empathy or "a common sense of identity and interdependence with those with whom we share food and other resources as equals" (ibid: 209).

Writing in the mid-1800s, de Tocqueville believed that "substantial differences in material living standards between people were a formidable barrier to empathy". He used this binary to explain the strong sense of community amongst the White population in the US at the time, and their complete lack of empathy for their slaves (ibid).

Injustice shows well-documented self-reproducing tendencies, particularly when caused by structural domination and repression (Smith 2003; Mabin 2005), so it is not surprising to see inequality do the same.

French sociologist Pierre Bourdieu, explaining why social mobility is held back in hierarchical societies, describes how "material differences between people, the amount of money and resources they have, become overlaid with cultural markers of social difference, which become matters of snobbery and prejudice" (Wilkinson and Pickett 2009: 163). Such markers create a system of indicators for gauging another's social class. Wilkinson and Pickett further suggest that whether we admit it or not, we all judge others by the way they speak and dress, what they eat, their choice of entertainment, and so on. This tendency spatializes to an extent in the institutions and organizations with which we are affiliated, but nowhere does it do so more than where we dwell. At city scale, the first thing a new acquaintance will ask is where we live, which gives an immediate idea of our economic standing, and alludes with reasonable accuracy to the house form we occupy. Whether it's an urban flat, a suburban house or a self-built structure in an outlying area, our choice (or lack thereof) of housing is seen to be intimately linked to our lot in life.

To better understand how inequality manifests in the physical form of cities, and especially in the most intimate of building types—the home—we turn back to Paris in the latter half of the 19th century.

To open up the congested, near-ungovernable city centre, Baron Haussmann cut through it with a structured network of wide boulevards. Plentiful spacing improved mobility for economic and social exchange, and the new sewers and aqueducts brought sanitation. Sennett (2018: 32) describes the new housing lining the boulevards, catering to the Parisian *bourgeoisie*: "A courtyard might contain shops and workshops which serviced the local *quartier;* then, in an abrupt break, the rich would occupy the next level up [ ]. Haussmann sorted the further upper storeys systematically, so that as one climbed the stairs, one encountered respectable but less wealthy tenants, with the servants hidden up in the garrets." Artists, he explains, lived in shacks on the city outskirts, while the "huge mass of labourers in the city were hidden away behind the boulevard houses, in untouched, festering quarters. The economic ecology of the new city resembled soiled underwear

beneath a ball gown" (ibid: 33). Here the well-off and the poor tended to settle very close to each other, even under the same roof, albeit with very different living standards. Dating back to pre-industrial times, this proximity supported the interdependence between the 'served' and 'servant' classes.



Fig. 38: Part of a painting of the boulevard *Champs Elysées* in Paris after Hausmann's intervention, by Camille Pisarro, 1898.

Around the same time in London, wealthy industrialist and self-styled social scientist, Mr Charles Booth, conducted a rigorous survey of housing conditions and inhabitants, titled *Inquiry into the Life and Labour of the People in London.* He began with the East End (1886-93) where poverty levels were highest, and continued until he had documented the entire central city. Completed in 1903, the study comprised over 450 notebooks and a series of 'poverty maps' with buildings colour-coded according to inhabitants' SES.

The seven colour categories range from mustard yellow at the top end denoting "Upper-middle and upper classes. Wealthy" to the bottom, where solid black denotes "Lowest class. Vicious, semi-criminal". These polar extremes seldom appear, with most city-dwellers classified in the middle three brackets: "Fairly comfortable. Good ordinary earnings" (pink), "Mixed. Some comfortable others poor" (purple), and "Poor. 18s. to 21s. a week for a moderate family" (light blue) (Orford *et al.* 2002). These categories intertwine across the urban fabric, with the better-off living along main and side streets, and the worse-off occupying the inner parts of city blocks. Notable are the patterns created by the second and sixth categories. Those classified as "Middle class. Well-to-do" (red) frequently appeared in linear strips along main commercial roads, where buildings housed ground-floor shops and services. Those classified "*Very poor, casual. Chronic want*" (dark blue) lived in large clusters on the least desirable, most polluted land, often beside gas works and coal yards. This closely mirrors Sennett's account of Paris after Haussmann.



Fig. 39: A segment of Booth's poverty map of central London

Discussing the development of the first council housing estate in London at the turn of the century, Lynsey Hanley paints a grim picture of the East End's underground slums, which were home to thousands of "pieceworkers who scrabbled together a living making matchboxes and clothes pegs" (Hanley 2012: 54). The poorest of these, between Shoreditch and Bethnal Green and nicknamed 'the Old Nichol', was described by a local newspaper as "but one painful and monotonous round of vice, filth and poverty, huddled in dark cellars, ruined garrets, bare and blackened rooms, reeking with disease and death, and without the means, even if there were the inclination, for the most ordinary observations of decency and cleanliness" (ibid).

Hanley notes the impossibility of maintaining a normal family life in such environments, from which occupants surfaced to visit "late-night drinking clubs where men and women would bash each other to bits in mutual hatred of their predicament" (ibid). The average life expectancy for low-paid workers (labourers, servants) was 16, rising to 26 for tradesmen and reaching 45 for professional classes (ibid: 53). Booth's first report shed light on these conditions, and recommended State intervention. Slum clearance programmes were initiated to demolish and replace this dominant form of working-class housing, the "dank back-to-back terraces in which filth reigned and families of twelve or more crammed themselves into single, rat-infested rooms" (ibid).

The Boundary Street Council Estate began construction on the site of the Old Nichol in 1893. Once complete, it contained 1069 dwelling units in 23 5-storey Arts & Crafts inspired tenement blocks laid out in radial patterns, designed by London County Council (LCC) architects to optimise natural light. They

achieved "high density—that is, housing a large number of people within a relatively small area—without sacrificing health-improving amenities such as the communal laundry and nearly 200 shopfronts" (ibid: 55). The Old Nichol slum had crammed in 941 people per hectare, most of them underground. This new estate housed 886 people in the same area—but with communal play areas, and a public square. Regrettably, the rentals were accessible only to the best-off of the working class, and out of reach for the people it was built to house. This remains a reality in public housing allocation today (ibid: 56).

That similar densities can deliver such different qualities of life means another variable is strongly at play in housing quality and satisfaction: the built form. While born out of the best intentions, the act of purpose-building accommodation for one specific sector of the population set what would prove to be a dangerous precedent for residential segregation not just by class, but by housing form.

In the introduction to the book *Estates,* Hanley (2012) captures this frankly: "Council estates are nothing to be scared of, unless you are frightened of inequality. They are a physical reminder that we live in a society that divides people up according to how much money they have to spend on shelter" (ibid: 5).



Fig. 40: Boundary Estate, today in upmarket Shoreditch.

Housing typologies have come to be associated with certain classes of occupant, which often maps onto race or ethnic groups. The spatial concentration of wealth and poverty is a self-perpetuating cycle in which those at the top live in ignorance of everyone else, and those at the bottom suffer not only from physical lack but also mental stress caused by the stigma. "To be working-class in Britain," says Hanley, "is also to have a wall in the head, and since council housing has come to mean housing for the working class (and non-working class), that wall exists unbroken throughout every estate in the land" (ibid: 149). One *Estates* reviewer notes the continued people/place stigmatisation by high profile figures in today's media, suggesting that "decades of conservative thinking around poverty and disadvantage" have led to a neglect of its causal factors, namely structural oppression by class, race and the State (Mooney 2008). This reinforces the folly of dividing up housing populations by income bracket. Instead of developing fixed offerings to suit different classes of people—whether that means public sector 'low-income' or 'gap market' housing, or private sector gated townhouses targeting the middle and upper classes—we need to explore hybrid and new forms of housing. But where to begin when asking how something as intangible and all-pervasive as inequality might be addressed by something as tangible, technical and context dependent as a housing development?

In tracing the roots of Africa's urban inequality, Obeng-Odoom (2015) looks to two American writers who studied the relationship between urban space and inequality, and whose ideas—while contradictory at the time—are widely accepted today.

The first is American journalist and political economist Henry George. His popular economic treatise *Progress and Poverty* (1879) forms the basis of an ideology now called 'Georgism', which is based on the belief that citizens should own the means of production and the fruits of their labour, and that every member of society has a right to share in the economic value derived from the land. He favoured a single public tax on the value of land instead of the burdensome, arbitrary taxation of labour and capital (*www.cgocouncil.org*). For George, urban inequality results from the privatisation of land. Allowing landlords to accumulate properties and collect rent thereon, he says, allows them to dictate the pace of urbanism, especially in well resourced, fast-growing urban centres. Rents steadily rise, increasing the wealth at the top while increasing poverty. More capital goes to landlords and less to the working class, who pay disproportionate amounts for rent yet find it increasingly difficult to access city land (Obeng-Odoom 2015). Inequality, George believes, should be addressed through "land taxation and public provision of housing" (ibid). His socially-focused approach recognises the need to prevent 'over-accrual', but puts the responsibility for redressing inequality solely in the hands of the State—a proposition less viable now in the current global economic climate.

The second writer Obeng-Odoom looks to is Jane Jacobs, a journalist, author and activist who spent years observing and engaging with the people of New York City. Her seminal work *The Death and Life of Great American Cities* (1961) is heavily critical of divisive, car-based urban planning and the way social housing projects were implemented in the US.

According to Jacobs, urban inequality—as manifest in gentrification, rising segregation and the destruction of old neighbourhoods to make way for highways and mass housing—is caused by Planners (Obeng-Odoom 2015). Top-down planning excludes most urban space users from having a say in any changes, resulting in dispersed, single-function forms with limited lifespans. These developments reinforce rather than mitigate socio-economic difference.

To address inequality in cities, Jacobs "calls for major reforms in the form of a private-led, but publicly-supported diverse urban planning system" (ibid). This would require Planners to embrace horizontal, participatory processes, and would involve the State incentivising (instead of restricting) the private sector (landlords, developers) by means of construction and rent subsidies, guaranteed tenants, tax breaks etc. This would make more affordable housing available in cities, but at smaller scale and interwoven with old and new city fabric. This is clearly a desirable outcome, but the means by which Jacobs proposes to achieve it are perhaps over-optimistic.

First, town planning is macro-scale, regulatory, two-dimensional, and housed within State structures that are innovation-averse and often removed from practical realities. That planning regulations in cities have barely changed in the last 50 years supports this. Second, Jacobs' proposal takes as a given that those who hold capital and decision-making power not only understand the complexity of today's urban environments and the difference between 'good' and 'bad' spaces, but that they care about the places they create and the people who use them.

We cannot assume either of the above to be true.

Finally, Obeng-Odoom (2015) arrives at what he sees as a third cause of urban inequality: neoliberalism. Globalisation, and the drive to turn cities into engines of economic growth that attract foreign investment and trade, has further bolstered inequality.

The neoliberal agenda in Africa is characterised by efforts to 'clean up' or 'decongest' streets and urban centres to attract new businesses (ibid), which works against informality and leads to the forced evictions of traders and entire settlements. The growing privatisation of public land means the poor become trespassers, further marginalising them and boosting inequality. This conceptual link is not new: "Thirty years of neoliberalism teaches us that the freer the market the greater the inequalities and [ ] monopoly power", wrote Harvey (2003). To avoid producing "worlds of inequality, alienation and injustice" we must oppose the "endless accumulation of capital", and imagine a more inclusive city based on new urban commons and a different ordering of rights (ibid).

One way to cast inequality in a slightly more useful light is through Abdoumaliq Simone's (2004) notion of *People as Infrastructure*, where the interactions and relationships between city-dwellers form a web that facilitates the movement of information, goods, services and social capital through urban space. If we concur with Simone (2005) that "the presence of urban residents themselves and their varied uses of each other as instruments to realize particular aspirations and imaginaries [ ] constitute the most significant form of urban connectivity", it follows that a greater variety of socio-economic profiles in a small geographic area will serve to strengthen this web.

It is perhaps pertinent here to mention the link between inequality and trust. The authors of *The Spirit Level* found a strong inverse correlation in their study nations between levels of inequality and trust (Wilkinson and Pickett 2009: 54). At one extreme, they exemplify Scandinavian countries, where two thirds of people claim to trust others, and unsecured items are left out overnight with no concern about theft. The reader is asked to "imagine living somewhere where 90% of the population mistrusts one another and what that must mean for the quality of everyday life—the interactions between people at work, on the street, in shops, in schools" (ibid). Few South Africans would struggle to imagine this. Our behaviour has adapted to accommodate a 'trust void'. Here, responsibility for belongings rests with their owner, and no pity is reserved for those who drop their guard. Opportunistic petty theft, even more common for low-income individuals, is seldom observed to rouse anger in victims; the crime economy is treated as simply another informal redistribution system. Global studies have proven that inequality erodes trust and community life, bolsters violence, and predisposes people to be less affiliative and empathetic and more aggressive (ibid: 236), yet as a society, we seem to have evolved specialist social mechanisms for negotiating this volatile urban realm.



Fig. 41: Warwick Junction, Durban's central transport interchange, is a vibrant web of overlapping infrastructures—old and new, formal and informal, hard, soft and hybrid.

Writing about Johannesburg, Simone (2005) notes how residents' vulnerabilities are constantly preyed upon, "for the inner city is an environment of trickery and deception, [ ] structured by the need to forge solid relationships of mutual dependency [that are] often relied upon in order to make ends meet". In the hustle for resources, everyone is regarded with suspicion, so to protect themselves, residents make sure not to show weakness and to "watch what they say about themselves, what they wear, the routes they travel, and the company they are seen with" (ibid). In a way, such mechanisms are like the components of an electrical circuit—switches, fuses and parallel branches—that allow current (social capital) to circumnavigate obstacles and pursue alternate routes (through city space).

Hamburg criminologist Christine Hentschel, in applying this concept of 'people as infrastructure' to urban mutuality in Durban, discusses some ways in which infrastructures shape social life in the city. "They lay out paths through which urbanites do or do not come together, and they condition what people can, and think they can, do with one another in the city. [They] give us a sense of who we are in relation to strangers, passers-by, fellow passengers. Whether we are all waiting at a bus stop or whether I lock my door whenever I am in my car makes a difference not only to who each of us *is* in the city but also to the kind of convivialities that are possible" (Hentschel 2015). She extracts the following from Durban-born novelist Imraan Coovadia's essay entitled *Midnight,* from the 2009 book *Load Shedding*:

> "[in] Durban the world doesn't end in the abstract; it ends practically. The police stations and the courts don't function. There is not a road in Durban where a woman feels safe after dark. Durban, South Africa's Indian Metropolis, is always on the brink of ruin. [Here] people don't stop at red lights after seven in the evening for fear of being hijacked."

Written in the years immediately preceding the WC2010 upgrade, the Beachfront's 'darkest days' of safety, this is still true for much of the city. Yet somehow, in the midst of it all—and, I believe, largely because of it—we cobble together "a landscape of different, sometimes disconnected micro regimes of safety [ ] with different ways of drawing their borders: some through walls and barbed wire, others through beauty and charm offensives, others still through sophisticated networks of communication" (Hentschel 2015). What she calls 'infrastructural experiments' act at the small scale, together with major physical infrastructure, to bolster safety and wellbeing in the city, "engendering particular forms of acting together" (ibid). Instead of disconnecting us, infrastructural dysfunction brings us closer together.

Hentschel agrees with Graham & Thrift (2007) that infrastructure's power to bring people together "does not necessarily arise from [its] smooth functioning but, on the contrary, from the crises and failures, the struggles and debates around it, and the disappointments and frustrations it so often engenders" (ibid).

In the face of climate change, human or 'soft' infrastructure is a necessity. With increasing extreme weather events threatening the built environment's physical integrity, human networks are showing themselves to be critical to overcoming hardship. Simply, we are more resilient when we act together. In examining this, Sennett (2018: 273) reviews two methods of responding to climate change in cities:

- MITIGATION, which entails building higher walls, bigger berms and stronger envelopes that will resist, with manmade technology, the forces of change

- ADAPTATION, a much more nuanced, cyclical way of recalibrating the built environment, updating it through working with rather than against people and nature

The first represents the status quo, and the second is possibly our only hope for the future. "The environment has to be built differently. The ethical way to build in cities accepts the primacy of adaptation. Sheer mitigation is an immodest strategy" (ibid: 278).

Over a century of enquiry in different contexts into the causes and manifestations of urban inequality has inspired numerous ideas around addressing this issue through alternative modes of housing development, several of which will be discussed in the next chapter. Some focus on bringing together people of differing SES, some give fiscal assistance to those struggling to access or purchase housing or land, and others look at the social benefits and improved QoL to be gained from sharing resources and spaces. Most propose relatively small tweaks to existing policies, processes and forms, and few have evidenced significant replicable change to date. Inequality in society and the built environment is a 'wicked' problem—one so complex and multi-faceted that it cannot be solved, only managed. Design-led thinking has proven effective when addressing wicked problems, so I will end with one example of an inductive or 'blue sky thinking' approach to the dilemma.

Barely a decade after Jacobs' *Death and Life,* Italian-American Architect Paolo Soleri published his proposals for Arcologies: cities crafted "in the image of man" (1969). A reaction to the "flat gigantism" of the suburban sprawl he saw as suffocating the living surface of the earth, Soleri theorised Arcologies as self-sufficient 3D ecosystems dotted around the globe like acupuncture needles, each designed for a different-sized population and a specific topographical

condition. In this scenario, man's footprint is minimised, and city-dwellers live within minutes of unspoilt nature.

At the core of Soleri's work is the belief that "primary and essential to man [is] the pursuit of *equity*" (1969: Part 1 Sec4), something he posits as unique to humans and upon which society is founded. To shift from critical to constructive thinking around possible Utopias, Soleri assumes a fairer, more just future context, granting what he calls a 'foundation of equity': "If there is no mention [here] of segregated minorities, of slum clearance, of exploiter and exploited, of tax unfairness, of bossism, of children killed by delivery trucks, of skid-row peripatetics, of pets not allowed, of profit incentives, of self-help, it is because one assumes that in time the skill of man will take care of them all" (ibid: Part 1 Sec1).

Arcologies are not proffered as a means to address societal inequality. Rather, the desired equilibrium is presumed to arise from increased congruence between the activities of men, and between man and nature.

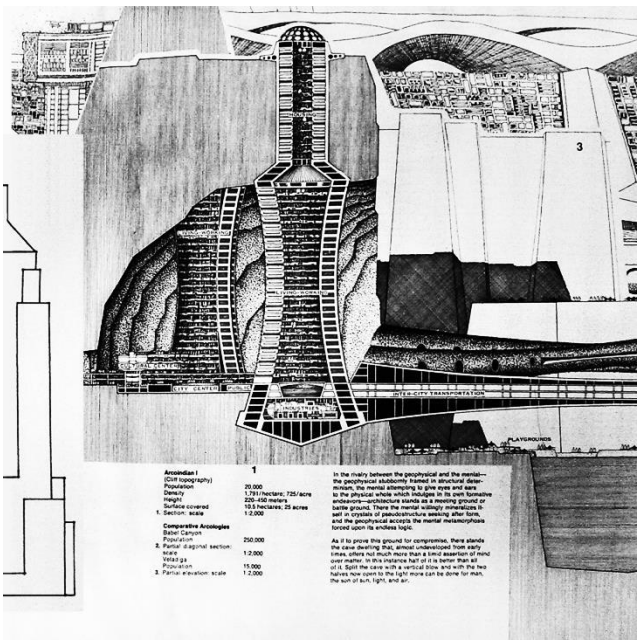


Fig. 42: *Arcoindian I*, one of Soleri's arcologies designed to accommodate 20 000 people, the approximate population of my study area, on/in a water's edge cliff site.

This is an early example in architectural literature of the belief that a person's ethical response to others is linked with their moral responsibility towards the planet. In a closed system with finite resources, inequality between wo/men is equated with an imbalance in nature's equilibrium, and Soleri's remedy—treating the built city as a self-regulating biomimetic organism—becomes non-negotiable if we are to see greater equality in future living environments. Given the timing of the present research with respect to all manner of Anthropocene challenges, any normative outputs it produces must not only embrace Soleri's worldview, but actively seek to establish progress towards its realisation.

The Social Production of Space

> "The architect, the planner, the sociologist, the economist, the philosopher or the politician cannot out of nothingness create new forms and relations. More precisely, the architect is no more a miracle-worker than the sociologist. Neither can create social relations, although under certain favourable conditions they help trends to be formulated (to take shape). Only social life (praxis) in its global capacity possesses such powers—or does not possess them. The people mentioned above can individually or in teams clear the way; they can also propose, try out and prepare forms. And also (and especially), through a maieutic nurtured by science, assess acquired experience, provide a lesson from failure and give birth to the possible."
> (Lefebvre, 1996: 369)

UCL Architecture Professor Bill Hillier, in *Space and Spatiality: What the Built Environment Needs from Social Theory* (2008), examines the social production of space under the headings 'Urban Sociology' and 'Society and Space', noting that both take a 'society first' approach, as the built environment is formed by the social processes taking place within it. He identifies this approach—the 'spatiality paradigm'—in the theoretical writings of late 19th and early 20th century urban sociologists Ferdinand Tonnies and Georg Simmel (DE), Emile Durkheim (FR), Louis Wirth (US), and Ernest Burgess (CA), and later UK writers Peter Saunders, Mike Crang, and Nigel Thrift. This paradigm, argues Hillier, is common ground for most 20th century social scientific approaches to the society/space question, referring to the late 20th century 'urban modelling' movement and the work of theorists David Harvey and Anthony Giddens (UK), Henri Lefebvre (FR) and Edward Soja (US).

Cross-cutting theories and methodologies like Hillier's space syntax, and fields of study such as spatial ethnography and human geography, analyse 'real space' and patterns of dwelling, capturing the experience of space, and the dual process by which spatial and social form inform one another. This contrasts with the unilateral way those operating in the built environment approach space, be they designers (Architects, Engineers), those shaping the city at a broader level (Planners, policymakers), or those using it for profit (investors, developers).

I hope to capture in this work the value embedded in the zone where physical, quantifiable, Cartesian space meets the invisible, unbounded, morphing space of everyday life. It is here that we may establish how local knowledge and practices translate into built forms that embody greater equity.

In unpacking spatial justice, it is important to understand what French social theorist Henri Lefebvre calls the *Production of Space*. First published in French in 1974, the volume describes the search for a unifying

theory of space, one encompassing the physical, mental and social: a '*logico-epistemological* space', that of social practice, sensory phenomena, and "products of the imagination such as projects and projections, symbols and Utopias" (Lefebvre 1991: 12). Dismissing the widespread notion of space as something for independent study, he declares that "(Social) space is a (social) product" (1991: 26), and elaborates a conceptual triad consisting of three mutually interdependent types of space, acting together to produce and reproduce space. They are, from most to least concrete: conceived, perceived and lived space.

CONCEIVED space refers to what Lefebvre terms 'Representations of Space', and comprises both the images and drawings produced by Planners, Architects and technocrats, and their physical manifestations in the built environment. This is the dominant space in society, tied as it is to the order imposed by the relations of production. Associated with knowledge, it tends "towards a system of verbal (and therefore intellectually worked out) signs" (ibid: 33, 39). Conceived space is primarily experienced visually in 2D and 3D, and is associated with 'expert' producers.

PERCEIVED space, alternately described as 'Spatial Practice', is understood as the continual, back-and-forth process of production and reproduction occurring over time: a slow, iterative 'spatial secretion'. In a capitalist society, spatial practice entails the interplay of a city dweller's daily routine with their urban reality (routes/networks connecting the places set aside for live/work/play). For example "the daily life of a tenant in a government-subsidised high-rise housing project" (ibid: 38). Spatial practice implies continuity and a certain level of cohesion in terms of each member of society's relation to that space (his levels of competence/performance), but not necessarily in the sense of an intellectually or logically formulated system. Perceived space, experienced actively, incorporates time (4D) and is associated with the everyday individual.

LIVED space, also termed 'Representational Space', is that of the city-dweller or user of space. The gentlest of the three types, this space is experienced passively "through its associated images and symbols". It is a dominated space "which the imagination seeks to change and appropriate. It overlays physical space, making symbolic use of its objects" (ibid: 39). These signs and symbols are by their nature coded to varying degrees (overt/covert, explicit/implicit, deliberate/subliminal) and may carry differing meanings for dissimilar users of a city space, but they nevertheless form systems which are more or less coherent, and as such can come to constitute shared meaning. Lived space is experienced mentally, at once individually and collectively, and is indistinct and overlapping.

Schmid (2008: 43) concludes from an analysis of Lefebvre's triad that "Space is at once perceived, conceived, and lived", so no one dimension alone "can be posited as the absolute origin, as thesis, and none is privileged". Also, by virtue of its connection with time, space is continuously produced and as such, can always be viewed as unfinished. But how can Lefebvre's abstract space be leveraged to inform solutions to the more concrete problems found in cities today? It is, I propose, when we introduce the *who* to the conversation that we ground it in reality. *Who* is able to lay claim on city space, not only to physically access it but to partake meaningfully in its (re)production and transformation, fill it with uses and activities, inscribe upon it an identity and a meaning, and make it one's own? Who is included or excluded?

The Right to the City

> "The intense levels of contestation over who has the *right* to do what in South African cities produces a situation where things can happen very quickly. Urban dwellers are not, as a result, constrained by the sense that specific places and resources belong to only certain kinds of uses or identities. There are constant, and often violent, arguments in apartment blocks, on streets, in taxis, in schools, and in stores about who can do what where. Such argumentation can open up places to greater flexibility as to their use, but it also can break down the integrity of places and a sense of propriety, which in turn makes them vulnerable to incursions and distortions of all kinds." (Simone 2005)

This vignette of everyday life in a South African city is from the essay *The Right to the City After Apartheid*. In applying his ethnographer's lens, Simone bridges the conceptual chasm between critical urban theory jargon and the lived reality as experienced on the ground. During apartheid, the 'layers' of the city existed in parallel, discernible only in instances when repressed cultures, practices or micro-economies 'bubbled up' through the surface: worship on a traffic island, traditional baptism on a swimming beach, informal traders at the fence of a construction site. The change of government caused an instant, somewhat irregular merging of these layers. With the collapse of artificial hierarchies and barriers imposed on its users, the confidence to appropriate urban space grew, and greater numbers of all sorts of people came to feel a sense of ownership of—and belonging in—city space. As city dwellers partake actively in daily life alongside others, "their own collective power is revealed to them, and they increasingly understand themselves as capable stewards of the urban and its collective life" (Purcell 2013). Such participation in urban space—what Lefebvre calls 'autogestion', or

self-management—constitutes a right in itself, albeit one that is mutually inclusive with the overarching Right to the City. They imply or invoke one another.

In his English essay *The Right to the City* (1996), Lefebvre articulates his earlier notion of *Le Droit à la Ville*, introduced during a time in France when "functionalist and technocratic urbanization processes were under severe critique for eradicating urbanity and depriving urban dwellers of places of social encounter through the rational ordering of urban space" (Dikeç 2001). Lefebvre explains how the nihilism which, a century earlier, had caused Nietszche to cry "God is dead, man too", had reared its head again in the modern city, and calls on us to "reach out towards a new humanism, a new *praxis* (social practice), another man, that of urban society. […] At the point we have arrived there is an urgent need to change intellectual approaches and tools" (Lefebvre 1996: 369). Labelling post-industrial postmodern man a disappointment, he suggests an alternative scenario in which society is an *oeuvre* and man, in turn, an *oeuvre* within it. He points out the "simultaneous overcoming of the old social animal, and man of the ancient city, the urban animal, towards a polyvalent, poly-sensorial, urban man capable of complex and transparent relations with the world" (ibid: 368).

The word *oeuvre*, here, means not just a work but a *work in progress*, speaking to the fourth, temporal dimension touched on previously, and the need to define the city as a process rather than as a finite product or object.

The Right to the City translates into a right to participate in urban space—a right claimed equally by all those who inhabit and use the city, regardless of nationality, class, race, religion or any of the other markers that have historically been used to exclude people (Soja 2009). The right to appropriate city space, explains Brazilian Planning scholar Abigail Friendly, includes the right to access, occupy and use urban space, but also the right to a city that meets the needs of its inhabitants, creating possibilities and places that support a dignified and meaningful life (Lefebvre 1996 cited in Friendly 2013).

Those intervening in cities today require a firm understanding of the difference between the social or 'use value' of land and its monetary or 'exchange value'. But urban value is complex, and our tools for analysing it are inadequate to explain how the same process can be simultaneously enriching and immiserating, or how we conceptually connect a woman selling tomatoes on the pavement with another walking by who has a Swiss bank account (Marx 2022). "What is it that holds people's lives together?" we might ask. In today's city, at once a place of great opportunity and imminent threat (Simone 2016), ambiguity and ambivalence must be kept in mind (Marx 2022). In developing a practical research agenda, Marx calls for a framework open-ended enough to account for the disparate types of value found in cities. Tracing, validating and connecting these, he posits, will help in identifying nodes where value is being extracted, converted or multiplied. This idea holds promise in dealing with urban plurality, but for now the use/exchange binary must suffice.

The pioneering City Statute, a progressive urban planning policy written into Brazilian federal law in 2001, was formulated to address "the most evident patterns of illegality, inequality, and degradation in the production of urban space" (Holsten 2008 cited in Friendly 2013). Its backbone is the recognition of the social or use value of land as more important than its monetary or exchange value, and the Statute comprises a series of innovative policies and principles that capacitate local municipalities to realise and enforce this important concept of 'social function' (ibid). Some of the instruments in this toolbox are:

- The *PEUC* and *IPTO Progressivo*, which address vacant land and real estate speculation by forcing landowners to activate such land and levying progressive penalties for defaulters.
- The *Solo Criado* which encourages development by granting additional property rights (eg. permission to build to a higher density) to one parcel of land in exchange for other land deemed important to serve a community function.
- The designation of Special Zones of Social Interest (*ZEIS*) which protects and formalises the land occupied by the urban poor (the *favelas*).
- The compulsory preparation of a masterplan for all urban areas over a certain size, with the full participation of city residents.
- Access to the decision-making processes affecting private and public land, by means of *Article 45: The Principle of Popular Participation*. This invites citizens and associations to get involved in urban planning and management, including urban policy councils, conferences, public hearings, impact studies and participatory budgets.

The first three leverage fiscal and legal mechanisms to redress power and quality imbalances in urban development, while the last two open up the planning process to all city users, giving them "direct control of their activities and the complete exercise of citizenship" (ibid). Despite—and also because of—the difficulties implementing such a broad/radical (and arguably also vague/utopian) policy that stands contrary to current legal frameworks, the City Statute offers valuable lessons for governments in how bottom-up, citizen-led processes can empower urban residents to join "the struggle over the shape of the city" (ibid).

Joining this struggle has another implication for urban dwellers: it reinforces their right to actively participate in the way the city is run. "Urban

citizenship, in this sense, does not refer to a legal status, but to a form of identification with the city, to a political identity" (Dikeç 2001). In examining the City Statute and its global offshoots, Purcell (2013) returns to the idea that the (more) just distribution and development of urban land is vital to implementing the Right to the City. Today, it is the norm in cities the world over for the "property rights of owners [to] outweigh the use rights of inhabitants, and the exchange value of property determines how it is used, much more so than its use value" (ibid). As a result, the Right to the City is largely understood as synonymous with the struggle to increase city-dwellers' rights against the rights of property owners and landlords, in order to break the cycle where the rich get richer and the poor get poorer. This, believes Purcell, cannot happen until we shift from our current post-industrial capitalist city to a gentler, more collaborative and open one, "a space for encounter, connection, play, learning, difference, surprise, and novelty" (ibid). In this new urban condition, city inhabitants must overcome their separation by engaging in meaningful interactions (ibid).



Fig. 43: Favela *Morro do Papagaio* against the backdrop of Belo Horizonte, where City Statute policies paved the way for other Brazilian cities to follow (Huchzermeyer 2003: 218).

Brazil is not the only country to have made headway in this regard. In the US, the national Right to the City Alliance, formed in 2007, is the main proponent of a broader movement. Framed around Lefebvrian ideals, inspired by the City Statute, and crystallised in reaction to large-scale displacement of city-dwellers by gentrification in American cities, it brings together Community-based Organisations (CBOs) concerned with issues such as homelessness, environmental justice, cultural preservation and the wellbeing of youth and minority groups. Emphasis is on community mobilisation and involvement in neighbourhood initiatives such as food gardens and co-operatives, and engagement with local government 'apparatus' like participatory budgeting and planning (Purcell 2013). Here we see reciprocal and empathetic modes of operating in city space, augmenting the rights of the previously disadvantaged and illustrating how a mixed entity made up of diverse stakeholders can achieve better results.

Supporting the notion of autogestion, and also complementary to the Right to the City, is the Right to Difference. This right challenges "the controlling forces of homogenisation, fragmentation and uneven development imposed by the State, the market and the bureaucracy" (Friendly 2013).

David Harvey recognised that contemporary cities need to offer a wider range of spatial and cultural experiences, accommodating multiple different time-space realities, "varying from that of the financial markets to those of immigrant populations whose lives internalise heterogeneous spatio-temporalities depending upon how they orientate themselves between place of origin and place of settlement" (Milgrom 2008: 269). Lefebvre, too, acknowledges the many contradictions found in his three types of abstract space, for example between "use and exchange values, quality and quantity, production of objects in space (commodities) and the production of space" (ibid). Non-linear relationships between dimensions and parameters appear to have created the need for a new type of space, one simultaneously born out of—and in reaction to—abstract space. What Lefebvre calls 'differential space', he describes as follows: "Inasmuch as abstract space tends towards homogeneity, towards the elimination of differences or peculiarities, a new space cannot be born (produced) unless it accentuates differences" (Lefebvre 1991: 52).

The prognosis thus far is hopeful. There is some agreement as to what the 'just city' needs to offer its residents, as well as some of the ways in which urban development can promote such qualities. But what of its nemesis, injustice? Is it enough to support and grow positivity, hoping it will eventually outweigh and displace negativity? Here we need a clearer picture of how justice and injustice manifest in the built environment, both conceptually and physically.

Spatial (In)Justice

> "Justice in the contemporary world tends to be seen as more concrete and grounded than its alternatives, more oriented to present day conditions, and imbued with a symbolic force that works effectively across cleavages of class, race, and gender to foster a collective political consciousness and a sense of solidarity based on widely shared experience."
> (Soja 2009)

How the definition of justice is construed depends entirely on who one asks—and when, and where.

Swedish sociologist Göran Therborn writes: "In the case of ideologies of what is good and right, it may be space rather than time that is crucial. Something may be good and just everywhere, somewhere, here or elsewhere" (Dikeç 2001). The term 'spatial justice' came into use in recent decades, encapsulating a multi-disciplinary understanding of the ideas around the production of space and the Right to the City. Simply put, it is the notion that spatialisation (the mode of social production of space) is a major systematic producer of domination and oppression—that is, of injustice (Young 1991 cited in Dikeç 2001).

While the older, more established notion of social justice is centred around the distribution of goods and services, Harvey took this further by combining it with geographer Bleddyn Davies' term 'territorial justice' to arrive at 'territorial social justice', defined as "a just distribution justly arrived at" (ibid).

Edward Soja brought the discussion to the fore in the 2000 book *Postmetropolis*, through his explicit use of the term spatial justice "as part of his ongoing project for the assertion of the spatiality of human life and the formation of spatially conscious politics" (Dikeç 2001). Speaking at the JSSJ conference in Nanterre, Soja (2009) explained how the earnest adoption of the 'socio-spatial dialectic' means recognising not just that our lived geographies "can have negative as well as positive consequences on practically everything we do" but ultimately, that both (in)justice and its spatial causality are "embedded in the geographies we inhabit, from the scale of the body right up to that of the globe". This resonates with the South African urban landscape, where domination and oppression has scarred at every scale, from the territorial (infrastructural gashes that slice and divide up the land) right down to the mental (eyes that hide the fear/pain/guilt lurking therein).

Seeking progress in emancipatory politics, Dikeç (2001) proposes a new triad, one in which Lefebvre's Right to the City and Right to Difference are balanced by what he calls the 'Spatial Dialectics of Injustice'. It is defined as the interplay between two distinct things:

- The SPATIALITY OF INJUSTICE: The physical or locational—but also more abstract social and economic—relationships and actions that sustain the production of injustice. The implementation of the GAA to produce unjust urban form is one example.

- The INJUSTICE OF SPATIALITY: The capacity of existing structures to reproduce injustice through space, not least by limiting or abolishing possibilities for the formation of political responses. That people of different races were prohibited from meeting in public spaces and institutions during apartheid is a good example of this. It meant the likelihood of different race groups realising, through social exchange, how much they had in common and the extent to which they were being manipulated by propaganda, was greatly reduced, along with the risk of dissent and mass cross-cultural uprising.

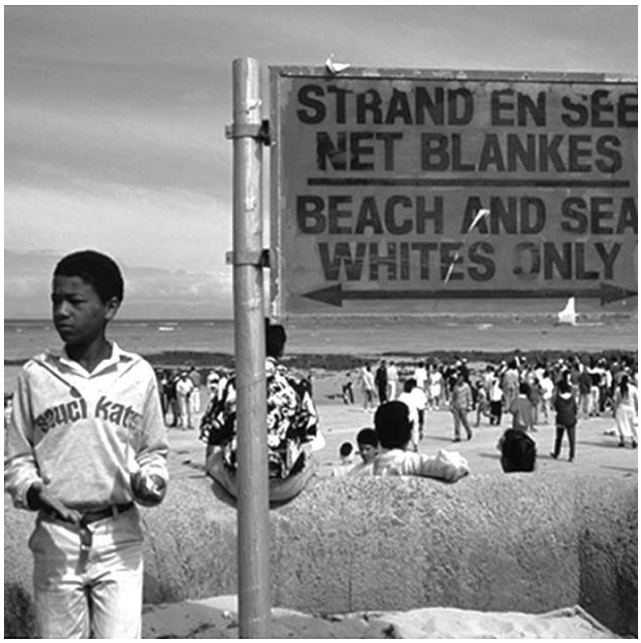


Fig. 44: Strand Beach, Cape Town, 1989. Thousands of non-Whites picnicked on 'Whites Only' beaches to protest against segregated hospitals, schools and neighbourhoods.

A study of race relations on Durban's beaches before and after the end of apartheid refers to Lefebvre, noting that "it is through the production of symbolic and material spaces that ideologies can become consolidated within the spheres of everyday life" (Durrheim and Dixon 2001). But such spatialisation, they note, is by no means static. What they call the "fluidity of ideological traditions" is evidenced by how quickly dominant ideas and behaviours change, but also in the "variable constructions of particular places and of the identities of the human actors who inhabit and use such places" (ibid). Simply put, while the built environment is fixed/immutable and prone to gradual change, the way people comprehend urban spaces and how this influences their identities and behaviours can and does change quite rapidly.

Why, then, is it so necessary for us to seek new architectural forms if our current cities are already more or less able to provide a minimum level of functionality? I wish the reason were because the lowest common denominator is simply not good enough, but the more likely answer is sadder: If we don't, our cities, in the not-too-distant future, could well become uninhabitable ruins.

From Segregation to Integration

Urbanisation's history is a tale of residential segregation according to SES, whether organically determined as in Victorian London; enacted with intention as in early and mid-20th century public housing projects; or enforced as an instrument of

political power, as in apartheid. Residential segregation in various forms and settings are found in most cultures and countries, but it was South Africa's National Party government that first made it explicit countrywide by writing it into legislation.

According to Lelevrier, urban policy is conceived around two basic notions: concentration and exclusion, and it is in the interplay between the two that the problem can be seen (Dikeç 2001). The planned geographic concentration of city-dwellers according to SES has proven time and again to fail, oftentimes with dire consequences for low-income groups. Concentrating poor and marginalised groups, sometimes labelled 'problem populations', has repeatedly resulted in urban and social decline (ibid). The practice moreover excludes the already disenfranchised from cultural and economic opportunities offered by the city, and the right to pursue self-betterment through new meetings and experiences. It also creates the risk of stigmatisation by housing form. And when the well-off retreat ever further out of the city into secured suburbs and elite enclaves, they seem to buy the freedom to move through city space as a visitor, to drive in and out, using it selectively as a stage for their own aspirations.

Such processes—inequality and injustice caused by "the accumulation of locational decisions in a capitalist economy"—we are reminded, can and will still operate "without rigid forms of spatial segregation" (Soja 2009). Redistributive injustice, while aggravated by discrimination of any sort, is not necessarily contingent on past planning practices.

Robert Park uses the term 'moral distance' (van Leeuwen 2010) and *The Spirit Level* talks of 'social distance', both of which translate spatially into "greater geographical segregation between rich and poor in more unequal societies" (Wilkinson and Pickett 2009: 162). Yet despite all we now know, residential segregation by SES persists as the dominant global development mode.

A closer look at how racial segregation mapped onto South African cities at various spatial scales is considered useful here. At the macro scale, divisive policies clearly cemented patterns of segregation, of the type sociologist Robert Park describes as "a mosaic of little worlds which touch but do not interpenetrate" (van Leeuwen 2010). Building on this metaphor, the irregular joints in the mosaic can be likened to the boundaries between tiles, both solid (walls, fences, industrial zones) and void (highways, vacant land, waterways) and the pieces they separate are different in size, shape colour, texture and age. Some are born out of this soil and local traditions, others bear marks from foreign lands, and still others are unique in their regional hybridity. Every so often there are missing tiles, voids left by the forced removal of non-Whites who had settled in mixed race and intermingled groups. District Six in Cape Town and Block AK in Durban are two such examples, where valuable pockets of land on the edge of the inner city are so highly contested they have eluded significant development to this day. There are two reasons why I find the mosaic metaphor more compelling than the term 'fragmentation'. First, 'fragmenting' implies splintering or smashing; an accidental chaos that denies the deliberate, meticulous engineering of apartheid plans. Second, the word alludes to a situation in which entropy is maximised, and shards are separated from one another with no hope of repair. This is not true of South African cities, which, for all their separation and unevenness, never ceased to function as viable wholes.

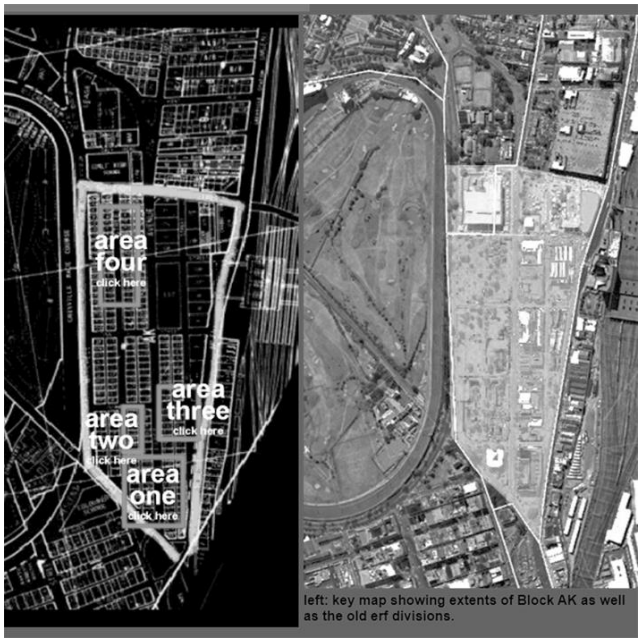


Fig. 45: Block AK, East of Greyville Racecourse before (left, circa 1920) and after (right, 2001) apartheid forced removals.

The imposition of the GAA meant that, during apartheid, segregation was less visible at the midi scale: residential neighbourhoods, where schools, local shops, services and public spaces served only a single race group. In the daytime, inner cities buzzed with people of all races who were actively engaged, albeit in a tiered way, with the economic engine. At night, people returned to their assigned areas to commune with 'like' others. At the micro scale, the individual dwelling under apartheid can be seen as an instrument and signifier of segregation (Bremner 2004). The size, form and location of a house indicated social class, but was also "where the most intimate of apartheid's violences—the domestication of the black person—[was] re-enacted" (ibid). In residential properties around the country, live-in 'maids' occupied basic outbuildings—cooking with paraffin and eating from enamel crockery—in stark contrast to the White families whose children they cared for and houses they cleaned. The post-1994 flattening of social hierarchies reduced such live/work arrangements, and most domestic workers now reside with their

families in peri-urban locations and travel in to work daily. Demand for student accommodation close to universities and colleges in urban areas led to a rise in private suburban outbuildings being converted to rental garden flats, creating a lucrative market for investors to buy up inner suburban homes and rent them out as student communes. So while the political shift rendered some suburban residential space more permeable than ever, the antithesis occurred to an even greater extent with the rise of the private security industry.

As crime rates soared, suburban walls grew higher and were topped with electric or razor wire. Community Policing Forums (CPFs) in wealthier neighbourhoods are increasingly investing in guard huts, boom-gated streets and private security patrols—the standard trappings of any modern security complex. In the early days of democracy, security personnel were mostly young Black men for whom this was "the only opportunity, other than crime, for inclusion in the new economic and socio-political order" (ibid). The South African obsession with home protection shows no signs of abating, but today men of all races and ages—and some women, too—work to "police the boundaries between inside and outside, order and chaos, privilege and terror. [ ] They are uniformed, trained, sometimes armed, and thereby domesticated" (ibid).

Security personnel share social class, not race. The example of domestic and security work supports what several scholars have suggested: that the continued fragmentation of our cities in the 'era of democracy' is, in effect, a new economic apartheid replacing the old racial apartheid (Marcuse 2003: xii).

Residential segregation, argues Iris Marion Young (1999), is wrong not because it entails the clustering of culturally or otherwise similar groups but because:

- It restricts an individual's choice of housing (location or form), which in turn violates the principle of equal opportunity
- Critically, it not only produces but reproduces spatial injustice, strengthening both unfair privilege and disadvantage
- The processes that produce segregation also make it hard to overcome by obscuring "the fact of privilege from those who have it", and through socio-spatial differentiation that prevents communication between groups, reducing the risk of organised resistance

Young identifies two broad approaches to addressing spatial segregation at city scale.

The first involves moving resources to the people, and includes interventions like in-situ informal settlement upgrading and the bolstering of new business centres some distance from the original centre. She makes a case for why this is more desirable in the US context than its alternative, the 'ideal of integration'. Todes (2003: 112-3) believes a resources-to-people approach to be at least as important in the South African context as its antithesis, urban compaction, noting the importance of working with existing fragmented spatial patterns when responding to the need for a variety of housing options, including those that support informal livelihoods and social structures. While the 'polycentric' model may have its advantages, we are reminded of the importance of centrality and legibility to a city's spatial organisation if we look at São Paulo, Brazil, "where newer centres have challenged and complicated the issue of centrality" (Mabin 2005).

Young's second approach to addressing fragmentation, described as 'integrationist', advocates moving people to the resources, opening access to well-provisioned neighbourhoods with better amenities for those who have, until now, been denied. One method for this, popular in the US, is via demand-side subsidies that provide low-income households with rental vouchers to be used in privately-owned housing in higher-income areas (Gornstein and Verrilli 2006). The model's main advantage is tenant choice with respect to housing form and location, and some (but not all) 'movers' on such programmes have shown positive outcomes. But this requires significant ongoing outlay by government, the money goes straight to private landlords, and—with no spatial component at all—it does not even begin to address segregated urban patterns.

The more widely accepted way of moving people to resources is through densifying existing urban fabric in an 'inside-out' fashion: inserting new affordable housing stock into disused or underutilised city spaces by infill development and adaptive reuse. This constitutes "a centripetal process of urbanisation—the reverse of conventional Western models [ ] that are largely centrifugal in the way they permit the sprawl of low-density suburban dwellings" (Denison 2012: 53).

What is known as the Compact City exhibits high densities and "high levels of mixed use in different zones or neighbourhoods, as well as enhanced quality of urban space, socio-cultural cohesion, safety and security (arising out of passive surveillance and social cohesion)" (Irurah and Boshoff 2003: 249).

Post-apartheid, principles of compact city theory were absorbed into South African policies because of their critique of the segregation and dispersion caused by the GAA, their focus on the "somewhat vague but all-inclusive concept of 'integration', and the promise of transformation" (Todes 2003: 110). However, they have largely failed to translate into practice, and dominant modes of housing delivery still favour the production of detached, individually owned dwellings (ibid: 111). Compact City theory has been challenged for other reasons too, including that it is too sweeping and ideological to be directly useful, that it obscures more pressing problems, or that it is incongruent with how

most people would prefer to live: in a house on a larger piece of land (ibid: 112).

Milgrom (2008: 268) agrees with Kevin Lynch's general criticism that functional Compact City theories tend to 'impoverish' space by reducing it to a series of parameters (distance, density, distribution), and suggests that its main weakness is its failure "to deal with the experience of the urban inhabitants". It is however prudent to reserve judgement on Compact City theory until energy is invested in designing, testing and refining it in the local context to see how its principles may apply to the broader desegregation project.

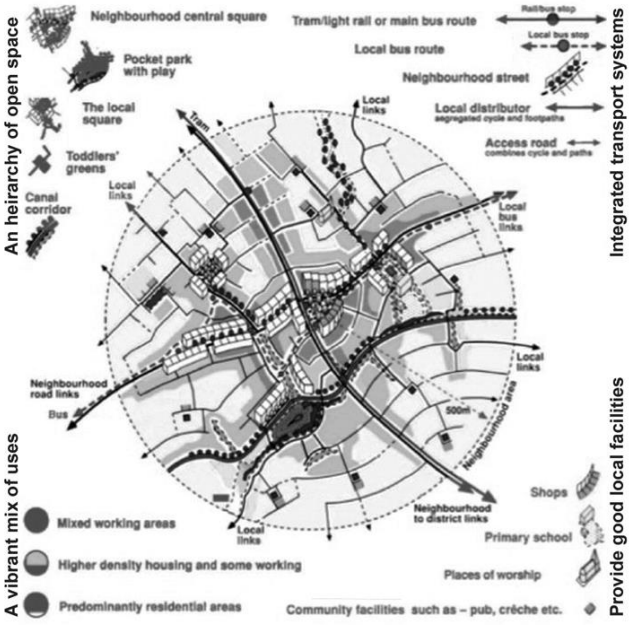


Fig. 46: Diagram illustrating Lord Richard Rogers' idea of an integrated mixed-use Compact City urban neighbourhood.

South African cities have changed considerably since 1994, and some resources have certainly been redistributed to previously disadvantaged people and places (Mabin 2005). Notes Simone (2005), this era in the country's history reflected "some of the most innovative policy and institutional manoeuvres applied to cities anywhere", as the urban landscape was substantially reshaped by interventions ranging from "integrated development planning [and] cross-subsidisation of urban services [ ] to the deployment of infrastructure projects to facilitate social integration". But, suggests Mabin (2005), development goals are continually thwarted by spatial injustice's tendency to reproduce itself. Longstanding suburbanisation processes have deepened segregation, and real income continues to be redistributed toward instead of away from "the successful, self-planning, private development industry".

Unpacking the varied usages of the term 'integration' in the government's UDF, Pieterse (2003: 130) concludes that ongoing segregation and fragmentation hinges on economics, specifically the "inability of planning frameworks and strategies to shift or even bend land markets that reinforce patterns of segregation and sprawl".

Two meanings ascribed to integration in the UDF are relevant here. The first, 'integrated spatial planning' refers to the confluence of social, economic and environmental planning to achieve sustainable urban development—in short, regulatory frameworks that "transcend the evils of apartheid-style segregationist planning" (ibid). Second, integration is likened to the 'glue' that holds together 'sectoral investments' in cities and ensures "economic and spatial planning come together [to] reinforce social development" (ibid: 133). This entails co-ordinated investments in the public realm: facilities like parks, schools and clinics, that improve perceptions of a neighbourhood and encourage private investment.

Both interpretations speak to the need for collaboration between government departments at municipal and provincial levels, and for holistically planned, cross-cutting initiatives that treat housing as inseparable from its enviro-socio-spatial responsibilities and outcomes, rather than a product to be rolled out *en masse*.

Huchzermeyer (2003: 213) looks to the UK, US and Brazil to explore some ways in which "housing policy instruments to desegregate or spatially integrate low-income housing have been developed, debated and enacted", all of which entail moving people to resources. The US Fair Housing Act of 1968 was introduced to encourage metropolitan areas to take responsibility for housing their fair share of low-income households. Based on local needs and calculated with a complex formula, residential quotas have proved difficult to enforce for various reasons, such as reliance on the private sector's compliance, and clashes with existing planning regulations. These regulations govern density, building setbacks and minimum plot sizes, and needed to be revised on finding that they directly increased the construction cost of housing units (ibid: 217). Strong resistance from private landowners to the building of low-income housing developments in middle-income areas—as faced by US municipalities seeking to enforce Fair Share quotas, and by the planners and communities engaged with land reforms in the Brazilian city of Belo Horizonte—is another real obstacle to desegregation efforts (ibid: 218). South Africa is no different: municipalities seeking to build social housing of any sort in proximity to high-value land are guaranteed backlash. This, I believe, stems directly from the 'batching' of groups by SES into house forms that label social class, underscoring difference. In addition, such 'helicopter' development (fly in, deliver, fly out) is bound to play on middle-class fears, whether they stem from conservatism, latent racism, or a genuine fear of the 'Other'.

Despite its varied and sometimes contradictory meanings, consensus generally exists that integration is a viable and desirable alternative to segregation. Young cautions us against blanket technical approaches to restructuring residential space, that "mix together segregated groups in the same neighbourhoods and communities" all over the city, in rough proportion to their occurrence in the wider population (1999: 243). This approach, she warns, focuses on 'mixing' rather than on the causal factors of privilege and deprivation. It denies the natural tendency for people to cluster in "affinity groups defined by ethnicity, religion, language, or lifestyle". This tendency is not in itself wrong "when its purpose is mutual aid and culture building" and it does not explicitly "exclude some people from access to benefits and opportunities" (ibid: 244).

For Oelofse (2003: 103-4), deliberate integration strategies and the social engineering they imply—whether through forced residential quotas or selective relocation to 'better' neighbourhoods—infringes on freedom of choice and association, and is itself an injustice. What then might constitute a more viable, organic form of residential integration?

Let us examine integration as a quantifiable parameter that can be used analytically to generate spatial solutions. Space Syntax, a package of theory and methodology developed by architect Professor Bill Hillier of UCL, employs a 'configurational approach' to establish the relationship between each individual space in a complex of spaces, indoor or outdoor, at urban, building or unit scale, and to map, describe, compare and predict complex usage patterns and utility levels (Hillier 2008: 224). This integration value indexes "how topologically close each space in a complex [is] to all other spaces" (ibid: 225), mapping space through daily activities and time periods (shopping, commuting, relaxing) on a continuum from segregation at one end to integration at the other (ibid: 226). In his view, human space, particularly in cities, can be used either conservatively to follow and reinforce existing patterns of social relations, or generatively "to create new social potentials by maximising co-presence through movement" (ibid: 227). Space Syntax analyses found that the more integrated a space, the greater its potential to impart change through enabling new social encounters and formations. But the more spatially segregated, the less transformatively it behaved (ibid). "Formal time-space-segregated systems are used to overcome distance and reproduce existing patterns in society, and informal, integrated systems are used to create the densities of high activity that permit morphogenesis and so move society on" (ibid: 228).

From studying informal, self-built neighbourhoods in Santiago de Chile, Hillier concludes that social advantage, with a vested interest in keeping things as they are, is more likely to pursue socio-spatial segregation, while social disadvantage has more to gain from a shift towards integration (ibid: 227). Of all the possible reasons why integration is critical in the search for new, more spatially just city forms, I find this the most compelling.

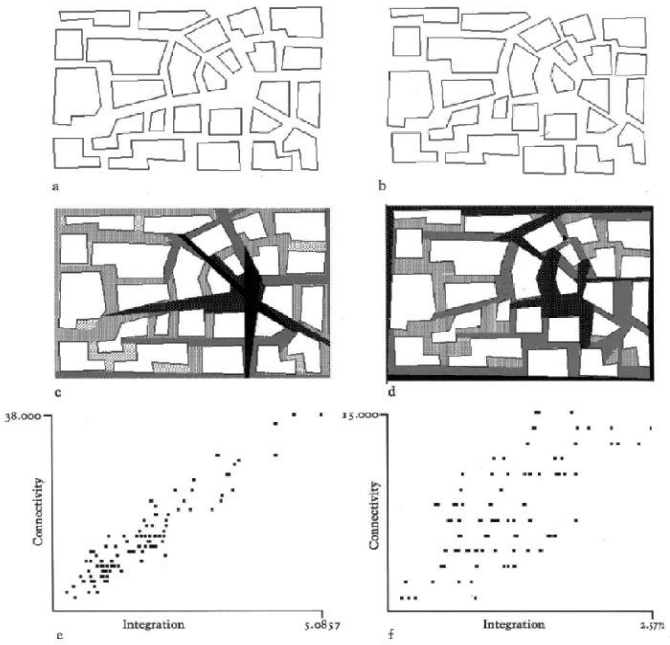


Fig. 47: Hillier's (1996) comparison of two different layouts for a set of identical urban blocks. Mapping the connectivity and integration of each space tells us which will work better.

Proponents of integration are many, but they enjoy no consensus as to its precise definition, the appropriate scale at which it should be occurring, or how to measure it. Asks Oelofse (2003: 98): "Is it best done at the level of a household, an individual housing project, a city block or a suburb?"

Analysing demographic maps of inner-city Johannesburg around the turn of the 21st century, Oelofse noted the complexity embedded in a small geographic area. At first there seemed to be a reasonable mix of income groups, but on zooming in, disparities between neighbourhoods became apparent (ibid.) Referring to a 1997 ICHUT report claiming that "the most populated parts of the inner city are not just experiencing deracialisation, but the wholesale racial 'tipping' from White to Black occupancy", he concluded that, ironically, racial integration strategies in this context would mean attracting White families back into the inner city (ibid: 93). Today, the proposal still holds some truth in the regeneration of South African city centres, but would need to shift focus from skin colour to SES and the need to attract middle- and upper-income households of all races.

Making urban space safer to draw affluence, and inserting new quality housing opportunities to invite diversity seems preferable to relocating people from areas labelled as undesirable. One way to leverage inequality in a generative rather than a destructive manner is to focus on those with more choice and

capital as a means to improve living conditions for those with less. This implies slower, more nuanced development processes that work with rather than override existing populations, and would necessitate the creation of innovative new architectural forms.

Conclusions

This chapter concerns itself with making sense of housing disparity. It identifies inequality as a root cause of societal dysfunction, and something that housing has a duty to address, not perpetuate. Historically, dwelling form and quality have always reflected the socio-economic status of inhabitants, yet until a century ago it was acceptable for differing classes to dwell together under one roof, albeit in a stratified way. Modernism largely put an end to this. The standardisations intended to bring equal light, air, space and access to nature for every citizen became instead a government instrument to house the poor—worsening inequality and giving built form to poverty.

Enquiring into the causes of urban inequality in Africa, Obeng-Odoom (2015) identified three possible culprits: Henry George's landlords—the private property-owning class that manipulate city space to generate maximum profit; Jane Jacobs' Planners—who over the course of the 20th century destroyed much of the old city fabric, replacing it with mass housing developments catering for single population groups; and present-day Neoliberalism—which prioritises global investment and appearances over the needs of (especially poor) city-dwellers. That inequality—both generally and in terms of housing—continues to worsen, indicates the inadequacy of current development models.

The acceleration of climate change has further revealed the fragility of man-made systems, highlighting the need for buildings and infrastructures that can endure and recalibrate as things change. Fantastical visions like Paolo Soleri's Arcologies, born out of the faith that man is capable of timeously fixing the damage he has caused, let us suspend disbelief for long enough to imagine the shape of the future.

Lefebvre's conceptual triad and the social production of space lay a solid foundation for discussions around the suite of rights to which city dwellers are entitled: the Right to the City, nested within which are Rights to Difference and Autogestion. When granted, these rights augment spatial justice. When denied, they constitute its inverse—injustice—a state prone to aggressive self-replication which is difficult to counter, given the relative permanence of existing built environments. This is the case for the segregated urban patterns resulting from apartheid policies, and the damage is evidenced across all scales.

We know residential segregation is wrong, for all the reasons proffered by Young (1999), but redressing South Africa's uneven landscape promises to be anything but simple. While progress has been made, at present the private and public sectors follow divergent paths, one operating in the top third of the housing market and the other in the bottom two-thirds, exacerbating instead of ameliorating the situation. The State channels huge capital into housing, whether by building low-income houses that are gifted to recipients, laying bulk infrastructure to get gap housing off the ground, or paying ongoing rent subsidies to SHCs. Very little is recouped. The private sector on the other hand, is largely unbridled, having little accountability for what they build and how. This makes it difficult to monitor, never mind control wealth accumulation.

Unlike countries such as Brazil, which adopted legislation to protect poorer city-dwellers' land rights, or cities like London, where gentrification and foreign investment have overhauled the urban landscape, South Africa lacks legislation to enforce the social use of land or the inclusion of quotas of affordable housing in new developments. As the next chapter shows, collaboration between the private and public sectors and the mixing of income groups at the project level are beginning to happen locally, but using only generic architectural forms and at a scale that disregards incremental, organic urban growth. This scenario lacks intermediary bodies to fill the development void—self-composed groups that give agency to the future occupants of housing, and which act as a platform for public and private interests to align their activities in pursuit of the same goal. Ultimately, spatial justice is not simply about access to housing, but also about having a say in how it is delivered, managed and occupied.

As Dikeç (2001) suggests, the discourse around spatial justice "might provide a conceptual apparatus that could be given normative content to guide the actual production of urban space" and through its "development and deployment might inform emancipatory politics willing to confront spatial dynamics that produce and reproduce various forms of injustice." One example of how this might happen is through the revising of regulations, particularly those belonging to an outdated epistemology, in favour of more "[a]bstract, general, and prevalently negative rules [that] allow individuals (citizens, architects, designers, developers…) to respond to new circumstances through innovative action" arising out of their own time and place-specific knowledge (Moroni 2016). In doing so, they enable the system to better harness "dispersed and contextual knowledge. [ ] It is the city—its citizens—who must be creative, not the public regulatory framework" (ibid).

In seeking integration, focusing on densification to address sprawl and fragmentation, as seen in Compact City theories, is a good start. Another is recognising that well-designed housing can catalyse the improvement of urban areas if it is grounded in place, time and actual lived realities, and establishes

connections at various spatial scales, whether that implies a sense of belonging for residents, or a building's spatial or functional reciprocity with its surroundings. Even the application of advanced, analytical software by Space Syntax shows integration to be a desirable outcome that supports positive transformation. Space, I conclude, is able to initiate change much more far-reaching than its footprint, and for many more people than just its daily users.

What, then, might be the implications of spatial justice for built environment professionals and other stakeholders intent on shaping a more equitable and robust South African city? Having discussed at length a variety of theoretical approaches to tackling socio-spatial inequality and segregation, we will now see how these approaches have materialised in different ways, places and time periods, and in response to specific local neighbourhood housing needs. The next chapter casts a wide net, exploring some of the proposals for and examples of alternative development modes—be they policies, processes or collectives—that can be seen to reduce disparities in living standards, support diversity, and bolster social and environmental resilience.

Chapter 3:

If you build it….

Housing development modes

> "Those who seek to plan cities under transformation must [ ] have regard to both the material legacy of the old era, with its own trajectory of change, and the spontaneous modifications of people coming to terms with a new social order over which they may have little control."
> (Smith 2003: 37)

To imagine new 'desegregated' ways of city-making, we must first appreciate the status quo in all its complexity, as indicated by David Smith above and Iris Marion Young (1999) before him. Chapter 2 looks from a theoretical standpoint at the causes and effects of inequality in cities, endeavouring to understand how spatial injustice manifests in South African urban landscapes and how this might be addressed through integrationist policies and initiatives. For the present work, the biggest takeaway from this discussion is that we cannot expect to impact existing, fragmented urban patterns if we continue to 1) batch new housing by income bracket, and 2) develop outlying sites with monofunctional programmes, disconnected from surrounding urban fabric, activities and people. New hybrid housing models that cater for all socio-economic groups are needed. In other words, mixed-income (MI) and mixed-use (MU) housing developments: residential buildings that also host business functions (shops, services or offices) and social facilities (crèches, resource centres, gardens).

Following a brief look at the various tiers of State-supported housing available locally, this chapter explores alternative multi-family housing development models from around the globe that invoke inclusivity, collaboration and multi-functionality. One need only glance at the sub-headings (Co, Mixed, Shared) to spot their common theme: working together to achieve a more juts, ethical dwelling paradigm.

The State as Benefactor

The primary research question enquires into prospects for an integrated residential high-rise, which would entail combining homes for different population segments into a single building. The various private sector property ownership and tenure structures for multi-family dwelling found on the Durban Beachfront—the same as those found all over South Africa—are discussed first in Chapter 5 with respect to the scoping study, and again in more detail in Chapter 9, when investigating how individual blocks are run. Assuming new housing models will marry public and private sector initiatives to offer affordable housing for middle-and lower-income households, a summary of State-supported housing is first needed.

At the bottom of the economic ladder are those who squat. Though laws to an extent prevent their removal, this group lacks tenure security and so they forgo making improvements to their space lest they are evicted or relocated to a 'real' house. In 1994, the Reconstruction and Development Programme (RDP) began rolling out capital subsidy 'low-cost' houses—freestanding 2-bed concrete block structures of around 54m^2, laid out in compact suburban patterns on peripheral greenfield sites (SA DPME 2016). The fully subsidised houses are handed to those who reach the top of long waiting lists and then relocate, some from established informal settlements. So despite the better-quality dwelling, beneficiaries are often socio-economically impoverished, as they are now removed from family, social support networks, and places of work (Charlton 2014: 187). The programme, which targets households earning under R3500/month and is now called Breaking New Ground (BNG), has built around 4.5 million homes in 24 years. In 2018, the backlog was around 2.1 million units (Thwala *et al.* 2018), and this increases each year. While much has been achieved with this model, it is not sustainable and has revealed itself to have many flaws: a minimum-standard cottage that is repeated in low-density arrays, and which consumes up to half its budget on laying new services. Other issues with the

model include substandard construction quality, allocation irregularities, a poor-quality urban realm lacking in facilities, and recipients' inability to maintain the property, leading them to rent it out or sell it (Charlton 2014: 187).

Variations on house form—duplex row houses, multi-storey walk-ups—have increasingly been built in the past decade. Pennyville in Johannesburg is an example of success achieved through innovative moves such as mixing typologies and tenure, securing well-located and connected land by swapping with a private developer, and market rate cross-subsidisation of rental units constructed on site (ibid: 185). A Human Settlements press release in May 2021 stated: "There will no longer be freestanding houses, since they take too much land and only accommodate a few people." But designing and building high-quality integrated housing takes more time and money, and its advantages over low-rise, low-density models are newly recognised.



Fig. 48: Proposed BNG housing in Tembisa, Ekurhuleni; Medium rise, 4-storey buildings for RDP, rental and purchase

The housing demand for this tier is supplemented with Community Residential Units (CRUs): old, single-sex migrant labour hostels converted to family rental units with shared facilities; and older council housing, typically low-rise Early Modern flats in inner suburban garden estates. An example is Kenneth Gardens in Umbilo, Durban's largest municipal housing estate and what researchers recently suggested might bethe city's most racially integrated low-income housing site (Erwin 2015).

The next economic tier has recently seen a different form of supply-side government subsidy used to construct new multi-family rental housing, or refurbish existing buildings—typically disused offices, hotels or flats—into apartments. These are let at affordable rates, equating to 33% of household income, to qualifying households earning between R2500 and R15 000/month.

In 2011, Human Settlements Minister Sexwale announced that social housing was 'going high-rise', citing a shift towards the rental model, a need for density, and a drive to attract people to the inner city and incentivise private sector involvement in housing provision (Paton 2011). This 'social housing' is developed and managed by housing associations such as Durban's First Metro Housing (FMH) and The Social Housing Company (SOHCO).



Fig. 49: Kenneth Gardens' Early Modern walk-up blocks, set in expansive gardens, have lasted well.

While it provides better located housing and promotes the upgrade of city space and the infill construction of more compact, viable building forms, this housing model also has its challenges, the biggest of which is maintaining affordability and keeping access thresholds low enough for the target market. As Charlton (2014: 185) points out, low-rent housing has been difficult to achieve in South Africa, as available funding models don't support multi-storey, low-budget rental without ongoing rent subsidisation. Key issues with rental social housing include inadequate maintenance levels, unclear or corrupt allocation policies, problems with on-site security and illicit activities, and rent defaulting—a reality of life for this economic bracket. Social cohesion in these complexes can be difficult to maintain in the face of high tenant turnover and fiscal tensions. Moreover, many in this segment aspire to home ownership, and are unsatisfied with the rental option (Huchzermeyer 2003: 221). For this income bracket, capped at R22 000/month (the minimum to qualify for a bank bond) and known as the 'gap' market, first-time buyers may purchase a home with the help of the Financed Linked Individual Subsidy Programme (FLISP). Depending on income, beneficiaries receive between R28 000 and R120 000 for a deposit on an existing unit

(contingent on mortgage approval) or to build a new one. Linked to the push for more inclusive housing, the programme has sparked the construction of new buildings and complexes tailored for this growing housing sector.

Wedgewood, a 20-storey mixed-use residential high-rise with 1340 'affordable' units in Sandton, Johannesburg, will boast high-end design and shared amenities found in elite condos, but at a slight saving. A 29m^2 studio unit is advertised to start at around R925 000, and a 52m^2, 2-bed, 2-bath unit at around R1,92 million—a hefty price tag, even for stable middle-class buyers. Marketed as 'lifestyle' flats, floor area is sacrificed in lieu of high-spec fittings and fixtures, and all units have long, thin open balconies with glass balustrades (Anon. 2020a). Only time will tell if these homes are affordable enough to be truly inclusive, and if they will ever be occupied by gap market purchasers, as neither their size nor design is conducive to family living, and families—couples planning children, single parents, and traditional two-generation families with three to five members—are still the focus beneficiary for subsidised housing in the country.



Fig. 50: In artists' impressions, Wedgewood looks like any new apartment block, but will be subsidised for the gap market.

The combination of this development model with this built form has many positives—for the economy, the environment, the developers, and those who access a flat in a well-serviced and connected area that was previously out of reach. But this project type has one major stumbling block: it continues to perpetuate residential segregation by income.

So what are some of the ways in which housing development can be carried out differently to achieve better results?

Co-Production

The Right to the City is more than just the right to be adequately housed and serviced: it must incorporate the right to choose to "use the city as an arena of mutable aspirations, to varying degrees of realisation" (Simone 2005). This implies equal opportunity to get involved in the processes that produce and transform city space.

The image of the 'drawing-board architect' or 'office-bound bureaucrat' with the 'grand vision' represents a top-down mode of city-making, one heavily criticised by architect and academic Thomas Dutton, who believed that by maintaining autonomy and not engaging, built environment professionals "cannot help but generalise and universalise their discourse, in other words, to speak *for* the people instead of *with* them" (Milgrom 2008: 271). Building on his longstanding relationship with the community in Over-the-Rhine (OTR), a historic inner-city Cincinnati neighbourhood characterised by the extremes of homelessness and gentrification, Dutton was instrumental in setting up Miami University's Center for Community Engagement (CCE). Since 2006, students from disciplines as diverse as geography, education and architecture have participated in "full-time living and working immersion experience in the school of social life". CCE projects are diverse and multi-scalar, from working together with the homeless at a drop-in centre to compose and exhibit poetry, to the participatory design and construction of a 13-unit housing block (*https://sites.miamioh.edu/cce-otr*).



Fig. 51: Maverick Belgian Architect Lucien Kroll was famed for his participatory practices and architecture that embodies Lefebvrian ideals. The medical residences at the Catholic University of Louvain (1970), were co-created with students.

In a working paper titled *Econocide-over-the-Rhine*, Dutton (2014) explains how their work with the OTR community was instrumental in shaping a third, in-between neighbourhood narrative—one that bridges

the old image of a dangerous, blighted, poverty-stricken place with the one invented and sold by pioneers of the 'new urban renaissance'. Aimed at resisting the macro-economic forces of gentrification and preventing the displacement of marginalised communities, CCE's work relies on the full gambit of actors coming together to co-produce city space. As such, they proffer valuable methodological lessons in pursuing spatial justice. In this scenario, roles are reversed: the Architect becomes a facilitator rather than an expert, giving agency to local residents who, with their practical knowledge, become the authority.

For the World Design Capital 2014, the City of Cape Town employed 'design-led thinking' and its canons (collaborative/creative/inductive/user-centric) to explore how design can be leveraged to solve complex problems and improve communication at municipal level, both internally and between departments, and between local government and city-dwellers. Creative methodologies were designed for large multilingual group workshops where stakeholders as disparate as a Ward Councillor and a shack-dweller sat together to co-produce mutually desirable visions of a particular city space. Volunteer professional and student designers participated in all workshops, briefed to assist others in visualising ideas rather than bringing their own to the table. They translated raw outputs from the workshops into workable plans, which they handed over to local sub-councils. These plans were then implemented with area-based funding (Duncan 2015: 183).



Fig. 52: Bonteheuwel residents work together with designers and officials to reimagine their town centre for WDC2014.

Such whole-system interventions acknowledge the problems and opportunities embedded in a place, but also the physical resources and social capital (networks, skills, people) attached. They open the door for stakeholders to agree on shared values and principles, and this helps guide development.

Participatory processes like this are rare in South Africa, where the consultation called for (only) in public projects is either glossed over or fulfilled by a public meeting where residents are told, occasionally shown, what is to happen in their area. And private developers operate with near-complete autonomy, answerable only to the same municipal planning regulations—mono-functional zoning, maximum coverage restrictions, minimum building setbacks and parking provision—that shaped apartheid cities.

Looking further afield, what contemporary examples can be found of dense urban housing that gathers together people of different cultures, life stages and/or income brackets, leverages design innovations and enables resource-sharing and the growth of social capital?

Housing Co-Operatives

Europe has a long tradition of housing co-operatives, and the move towards more socio-economically and environmentally sustainable ways of city living has meant a steady rise in their popularity.

The first independent housing co-ops or *genossenschafte* arose in mid-19th century Berlin, and today they are home to on average 10% of European populations, reaching as much as 20% in some countries (CECODHAS and ICA 2012). A report prepared by these international organisations defines a *genossenschaft* as "a housing business that is a consumer co-operative [ ] jointly owned and democratically controlled by [its] members according to the principle of 'one person, one vote'" (ibid). They can operate as rental, owner-occupied or hybrid models. Units are bought through company shares, and if an owner member decides to leave, they must sell their shares back to the collective at cost. The benefits of such models are many, but hinge on making affordable, high quality, Architect-designed housing accessible to a wide range of people. Importantly, they support flexible living configurations tailored to modern lifestyles and non-traditional households: singles, the elderly, extended and composite families and affinity groups, for example a collective of health workers. Co-ops benefit their members as well as public interest, ensuring that land is developed in a socially focused (not profit-driven) manner, working against property speculation, and encouraging the long-term growth of stable, diverse communities (ibid).

A good example is Kalkbreite in Zürich, Switzerland, completed in 2014. The Genossenschaft Kalkbreite, formed in 2007, gathered local residents, potential tenants and two pre-existing co-ops to compile a bid for an innovative, mixed-use housing complex on a central site—the former holding yard for the No. 8 tram (Maak 2015: 153). The 850-member collective won the bid to develop the city-owned land, and the resulting

design is a triangular perimeter block, eight storeys at its highest, with 55 apartments containing 97 residential units, housing 250 people. Ground-level perimeter spaces house shops and restaurants, and the first and second floors hold offices and studios. Residents are 'sucked up' from a street level plaza by a wide staircase into a raised, landscaped courtyard onto which the apartment block's reception and shared facilities open. These include a library, laundry room, canteen, toy library and day-care, and large communal kitchen/dining area.



Fig. 53: View into the courtyard garden and playground from the stepped roof terrace which has additional apartments and a variety of service and recreational open spaces.

Kalkbreite's inhabitants are diverse, and include a high proportion of Swiss Orthodox Jewish and Syrian immigrant families. Their involvement in the planning stages meant special features could be incorporated, like a hand-powered (not electric) fountain pump for the playground. Renowned local architects Müller-Sigrist explored new solutions based on user attitudes towards and preferences around space-sharing. Unit design is innovative: small flats with bathrooms cluster into a 'large household' with shared living areas and a variety of units, some up to 7-bed for larger group or family living. 'Joker' rooms spread around the building can be annexed to existing living or work units, allowing a growing family to rent extra space instead of moving. Each resident is afforded about 33m^2 of floor area in Kalkbreite, less than the Swiss average of 45m^2, which means more efficient space usage without sacrificing living standards.

Social cohesion has risen from the use of the common areas (PROJEKTDOKUMENTATION 2014). A key result of this organised compaction is cheap rent, around 60% of market rates. The rental-only model is highly flexible and permits downsizing to a smaller flat, say when children leave home, which addresses 'overhousing', a growing problem in light of Switzerland's ageing population.

Kalkbreite meets the highest environmental and energy-saving standards, and due to its central location and public transport connections, the co-op decided to forego private cars (and parking) entirely, providing 300 bicycle bays instead.

Economically, this model supports diversity and change: commercial spaces of varying sizes allow a small florist or NGO to rent alongside an upmarket cinema bar, and additional 'flex' spaces—offices, meeting rooms, workstations—can be let from the co-op as needed. The complex has an 11-room guesthouse to cater for visiting friends and family of residents and to generate revenue, and operations and maintenance are managed by a dedicated crew who meet regularly with residents to ensure the block's smooth running (ibid).

So successful was Kalkbreite that the now-1500+ member co-op is constructing a second building on a larger site near Zürich Central Station—the *Zollhaus*, or Customs House. This radical approach to co-operative housing contains within it all layers of city life—culture, ecology, time—overlapping in ways that present new opportunities for all. A critical aspect of this development mode is the introduction of an intermediary between government and people: a strong, trusted voluntary body which represents the group's interests, negotiating better land, goods and services on their behalf. The State, no longer required to intervene in individual housing, is free to support co-ops via 'higher' processes like guaranteeing building bonds for financiers or releasing municipal land to them for sale or long-term lease.

The co-operative housing model is a loose framework that scales well. Denmark's '60s and '70s suburban co-housing clusters consisted of around 30 like-minded families (roughly 100 persons), typically Leftist teachers, Architects and their ilk, seeking a less isolated way of life. Their attached units were built 15% smaller than usual in order to fund a large, well-equipped common house where shared meals and childcare, among other things, gave working parents more family time. Such 'joint building ventures' enable people to partake in building a community environment that matches the way they envisage living (Maak 2015: 225).

In circumstances where co-operative culture is weak or non-existent, it is often creatives themselves who rise to the challenge. "Architects do not wait like a depressed private detective for a client to show up and finally give them a job: they commission themselves, design a residential building, and then look for people who would like to live exactly that way" says Maak (ibid). This is what Jeremy McLeod, principal of Breathe Architecture, did when he and a group of friends bought land beside the railway tracks in Brunswick, Melbourne, replacing an old warehouse

with an attractive, 4-storey block called The Commons (2013). The building has 24 compact, stylish owner-occupied units that share a communal rooftop with a laundry, drying lines, vegetable boxes, beehives and a landscaped garden and barbeque terrace with great views. The ground floor houses a coffee shop, wine bar, bicycle garage, and Breathe's offices, and the two parking bays outside are reserved for a car-sharing scheme to which all Commons residents belong. The building is carbon neutral, uses no gas and supplements green electricity with solar panels. Building materials are non-toxic, ethically sourced, and recycled where possible. The bricks are from prior demolitions and the interiors are minimal, with raw, almost industrial, yet elegant finishes. This contributes to keeping construction and running costs well below average. The car-free principle met with resistance from the local council, as it did not comply with the 'two bays-per-unit' parking requirements, and also from commercial developers who saw this as a threat. But the collective eventually convinced the officials, and The Commons went on to win 13 merit awards, becoming the flagship project of Nightingale Housing Co. Ltd. With the motto "Build less, to give more" and a promise to develop homes for "People, not investors", the company has grown, with four complete projects, 11 under construction, and one in planning. Newer developments include small-footprint units called *Teilhaus* apartments which are cross-subsidised by the larger units to make them affordable to first-time home buyers.



Fig. 54: Nightingale 1 (2017), a 20-unit owner-occupied eco-friendly apartment block directly opposite The Commons.

The Nightingale model's success evidences a growing demand for more collaborative, less destructive ways of living in cities. Like Kalkbreite, it demonstrates the value added by responsive architectural design and people's involvement in the decisions around their own housing. It must be qualified, however, that Switzerland and Australia both have very low inequality levels compared to South Africa—Gini coefficients of 0.32 and 0.36 respectively, compared to 0.62 (*www.statista.com* 2020).

Locally, co-ops only have a strong presence in lower economic tiers, operate across sectors such as agriculture and business development, and are organised like savings clubs or *stokvels*. The SDI-affiliated Homeless People's Federation *Abahlali baseMjondolo* assists housing-focused co-operatives to access land and finance, and in the case of self-built homes, skills training and materials. But these co-operatives, many of them women-only, tend to eschew outside intervention, which can be a weakness. In federation-supported Victoria Mxenge self-managed community housing in Cape Town, failure to consult a geotechnical engineer led to later problems with land stability (Huchzermeyer 2003: 223).

That co-operatives have not made it into mainstream South African culture is unsurprising, given that our political history has primed us for competition over co-operation. But their strong presence in low-income communities shows that the collaborative culture so deeply rooted in African tradition does exist here, and these built examples illustrate how it can be leveraged not just to empower minority or disadvantaged groups, but for wider society and to help bridge the public/private divide. For Obeng-Odoom (2015), "[e]xalting Afro values of sharing and co-operation while de-emphasising modernist, Eurocentric ideals of incessant growth and competition" is key to addressing the continent's inequality through the "indigenisation and domestication of all institutions whose work touches on urban economy, ecology and society".

Mixed-Income Housing

When Ildefons Cerdà presented his masterplan for the grand extension of the city of Barcelona in 1859, it showed a grid of identical, square city blocks wrapping around the old, chaotic city centre and extending all the way to the city limits (Sennett 2018: 39). He initially intended for each city block to contain two parallel, 4-storey buildings housing all the functions necessary to urban life—commercial, institutional and residential—with much ground space left open. Over time, urbanisation led to densification, and these grew into fully enclosed perimeter blocks averaging eight storeys high, with only their courtyards left open. Notable about the social-minded planner's vision is not the form the urban fabric took, but the way in which it was to be occupied: he envisioned "mixed housing [ ] in which the apartments made for different social classes coexist in the same building without being visibly distinguished" (ibid: 40). The antithesis of the social stratification designed into Baron Haussmann's housing-lined Paris boulevards, Cerdà sought to emulate the 'Dutch Model' (ibid).

The Dutch embraced integrationist attitudes to housing as far back as the 19th century, when industrialists and merchants sought to provide better housing for their workers. Government support in the early 20th century saw the rise of housing associations which, after WWII, became heavily involved in reconstruction, ensuring that sufficient affordable housing was available for low-income city-dwellers (Van Boom 2018). Today, inequality in the Netherlands is low: the country has a Gini coefficient of only 0.28 (*statista.com 2020*). More than 300 housing associations provide for around 60% of the country's population across the income spectrum (Van Boom 2018). The resident mix in one such housing complex might be, for example, 20% low income, 60% middle income, and 20% high income, and expensive units cross-subsidise cheaper ones to make market development feasible. Since 1994, associations have managed to make this model work without government subsidies. Organisations have relative freedom on condition that they maintain quotas of affordable units, and some invest back into their communities (ibid).



Fig. 55: The floating city of Ijburg, under construction, consists of 30% private, 30% affordable rental, and 40% market-rate rental housing, with all three found in each block.

What sets this mixed-income housing model apart is that from the outside, there is no way to distinguish which units are which: "[R]inging the bell for apartment 4C, you have no idea how rich are the people within; there would be no 'poor doors' of the sort which typifies schemes for mixed housing today in New York—the rich entering by the front, the poorer residents by the side or back" (Sennett 2018: 40). Design differentiations are discernible only in fittings, finishes and room sizes. Neighbours and their children all use the same courtyards, play areas, shops and public spaces, and are free to socialise (or not) as they please, regardless of SES, ethnicity or other social markers. This doesn't mean that tensions between groups (e.g. homeowners and low-income renters) disappear, but in communities where social hierarchies are flattened to this extent, conflicts are less frequent and easier to resolve (Van Boom 2018).

Social bridge-building appears to be supported by such environments for two reasons: mutual empathy born out of a better understanding, and the common goal of maintaining a safe, pleasant living situation.

The post-war period saw the large-scale construction of public housing projects all over the United States, based on Le Corbusier's Modernist vision of high-rise 'towers in a park'. This repetitive, anonymous architecture which concentrated and isolated poverty was a major causal factor of increased gang activity and crime in US cities. In response, the state of Massachusetts began in the 1960s to promote mixed-income development as a viable model for producing affordable housing (Gornstein and Verrilli 2006). Their Housing Finance Agency financed 16 mixed-income developments in which fully subsidised units were supplied alongside middle-income and/or market-rate units, and conducted a 'social audit' of its efforts in 1974 (Rosenbaum *et al*. 1998). The study—which did not explicitly enquire into the impact of tenant mix but focused on residential satisfaction—found that those in the most integrated developments tended to be most satisfied. The authors stress however that the determinants of satisfaction were not the residents' demographics but rather the development's physical aspects; "Higher-quality construction and design features, as well as superior management and location" tended to be qualities of MI housing, when compared to standard public housing (ibid).

Growing awareness of the problems inherent in concentrating poverty in cities came to a head with William J. Wilson's 1987 book *The Truly Disadvantaged*, which proposed that housing combining "low-income and higher income households in the same development" could, through the proximity of working families, provide positive role models for less privileged youngsters (ibid). Access to resources connecting low-income residents to education and job opportunities would, he hoped, lead to upward mobility.

Broadly, there are two approaches to MI housing development. The first is to site such housing in 'good' areas, typically in low or mid-rise complexes in 'low-poverty' suburbs, in order to move poorer families to opportunity. Research in the US showed positive outcomes for 'movers' on such programmes, and proponents of this approach cite its potential to "reduce opposition to affordable housing in low-poverty areas and suburban communities" (ibid). It can also work against the nimbyism (*Not in My Back Yard* syndrome) characterising desegregation efforts, as it is less discernible on the face of the city than low-income housing alone.

The second approach to MI housing development is to renovate existing inner-city public housing stock, repurpose 'tired' or derelict buildings, or construct new housing in dilapidated inner-city neighbourhoods to attract some higher-income tenants who will co-habit alongside those classified as low-income. This is the operational mode of the HUD's Housing Opportunities for People Everywhere (HOPE VI) programme which began in 1992, and also the 2007 Choice Neighbourhoods Programme, which expands on HOPE principles to address the revival of entire neighbourhoods (Fraser *et al.* 2013).

Different types of MI housing in the US vary "in the number of income groups included, the amount of income mixing that occurs, and the quality of housing occupied by various [ ] groups" (Schwartz & Tajbakhsh 1997). Low-income households, those that subsist on up to 50% of Area Median Income (AMI), are eligible to rent the most subsidised units in a development, and moderate-income residents with earnings of 50-80% AMI, the next tier up. Since the late 1960s, social housing occupants are required to pay 30% of their income in rent (Rosenbaum *et al.* 1998). A third group, with over 80% AMI, are the target demographic for market-rate units. In the literature, the two groups are referred to as 'project' (subsidised) and 'non-project' residents. Low-income households may occupy from 20% of a development to over 60%. More affluent households can earn as little as 51% or as much as 200% of the AMI (Schwartz & Tajbakhsh 1997).



Fig. 56: Crime-plagued, run-down social housing towers in Lake Parc Place, Chicago, were upgraded to include half middle-income families distributed evenly across all floors.

MI housing typologies vary as much as income group ratios ,and some buildings accommodate households from all of the above groups. Where units are evenly dispersed, mixing can occur on every floor. In other cases, lower income units are situated apart from higher income ones, in a separate building or even on a separate site. Some developments provide housing of identical size and quality for all, "while others offer smaller, less-lavish homes for lower income households" (ibid).

In line with historical housing policy in the US, most mixed-income developments offer rental prospects only, but a few include homeowners. Mixed-tenure MI models are increasingly common in countries like the UK, where home ownership is ingrained. Thatcher's 1980s 'Right to Buy' scheme saw a large proportion of the UK's social housing stock sold off to sitting tenants for a 'song' in a move to reduce reliance on the State. Most governments since have favoured subsidising home ownership over rental housing (Huchzermeyer 2003: 221). A further interpretation of US Fair Share legislation designed to distribute low-income populations more evenly across city space is the inclusion of set quotas of affordable units in all new-build housing developments (ibid: 217). In 2000, UK planning policy made each municipality responsible for ensuring an "appropriate mix of dwelling size, type and affordability in both new developments and conversions to meet the changing composition of households in their area in the light of the likely assessed need" (ibid). Local needs can translate into developments offering anything between 15% and 100% of their units at affordable rates. Such guidelines, in a Jacobsian manner, make the private sector responsible for providing homes that are accessible to a wider range of people. Supported by programmes like Shared Ownership, to be discussed shortly, this legislation benefits mainly young professionals and 'skilled strugglers' who 10 years ago could never have afforded an Architect-designed flat in a big city.

Conradie Park, constructed on an ex-hospital site in Pinelands, Cape Town, is a ground-breaking South African example of new mixed-income housing that aims to provide around 3600 units in mostly 4-storey perimeter blocks. The proposed mix is 51% units for sale on the open market and 49% subsidised housing, to comprise 70% social rental, 10% rent-to-own, and the balance, FLISP units. With 10 000m^2 of retail space and 15 000m^2 for offices, two schools, medical services, a retirement facility, pet-friendly parks, cycle paths, transport connections, and eco-friendly energy, water and waste systems, the development is entirely self-contained (Anon. 2020b).

Conradie Park's only link to the rest of the city is a single road bridge, and the existing canals and green tracts surrounding the settlement form natural buffer strips. This means that while socio-spatial and functional integration is high internally, the complex does not integrate with its urban surrounds. A partnership between developers and the Western Cape government, the project exemplifies their *Better Living Model* which strives for safe, high-density, high-

rise, residential-led development, active streets, walkability and socio-economic diversity.



Fig. 57: Aerial view of the scheme design for the 22ha site.

Designed by countrywide dhk Architects and socially focused local firm Jakupa in collaboration, the mega human settlement features attractive contemporary buildings with modulated façades, open balconies and passages, and face-brick used in innovative ways. Apartment block names reference local places, and photo-realistic renditions of public spaces show glamorous people of all ages and races—and their pets—moving around a "connected, multi-cultural community, marked by affordability, sustainability and security" (Anon. 2020b).

The first 66 social housing units in Phase 1 were handed over to tenants in early February 2022 (Damons 2022), and at time of writing, market rate units were selling well, with all 288 flats in 6-storey Paarl Rock already purchased.



Fig. 58: Apartments for sale on https://conradiepark.co.za/.



Fig. 59: Early artists' impressions show open-plan flat interiors with neutral, hardwearing, elegant material finishes & fittings

Shared Ownership

The UK government's push to "Widen Housing Opportunity and Choice" saw the number of affordable homes delivered annually in England rise to nearly 58 000 in 2020. Over 90% of these were new build, with four out of five delivered by private sector developers (UK Ministry of Housing, Communities & Local Government 2020). Though mostly rental stock aimed at low and moderate-income earners, the introduction of more demand-side subsidies for prospective homeowners, such as the Help to Buy and Shared Ownership schemes, saw a 35% decline in the provision of rental units. Help to Buy assists first-time purchasers, who must raise a 5% deposit, with a State loan of up to 20% of the property value (40% within greater London), and the rest is mortgaged through traditional channels. Unlike South Africa's FLISP subsidy which is 'gifted', the Help to Buy loan is interest-free for five years, attracts low interest thereafter, and must be paid off once the home is sold or bond cleared.

Shared Ownership is more complex but promises to be a more sustainable and agile means of reopening residential space in cities—space that in recent times has become inaccessible to the middle classes. Over the last five years, the number of new units delivered annually under this scheme has increased fourfold to nearly 18 000 (ibid). Shared ownership flats are usually developed and managed by housing associations, a middle-man akin to a traditional citizen-led housing co-operative or ethical developer. Also referred to as 'part buy/part rent', the scheme lets qualifying working applicants purchase a share of a home, typically between 25% and 75%, and rent the rest from the association at below-market rates. The units, usually flats, are leasehold properties, attracting nominal service fees and ground rents. Deposits are lower than on the open market, as are mortgage

repayments on the owned share, making finance accessible to a sector that was previously excluded. Possibility exists to increase the owned share via 'staircasing', which may lead to outright (freehold) ownership. Occupants' shares increase in value along with the property, and can be sold at any time provided the Association gets first right of refusal (*https://www.sharetobuy.com/*).

It is common for associations to buy and manage the affordable portion of private developments—flats that are simpler in design, but constitute a high-quality product at a fraction of market rates. One example is the award-winning Riverlight Quay complex (2015) designed by architects Rogers, Stirk Harbour & Partners, the flagship project of Nine Elms urban regeneration zone adjacent to Battersea Power Station. Rising out of a dynamic landscaped Thames-side public space, six residential towers from 12 to 20 storeys high offer ground-floor amenities including a restaurant, coffee bar, gallery, créche and Sainsbury's Local. Provisions for car and bicycle-sharing and e-car charging supplement multi-modal public transport on the well-connected site. Of Riverlight's 806 units, most are market-rate apartments valued between 0.6 and 3 million GBP and ranging from studios to penthouses. Targeting elite buyers, they include basement parking and exclusive facilities like a gym, pool, spa, library and digital lounge. The 116 affordable homes, all 2-bed flats with open balconies and under-floor heating, look identical from outside, but have higher sustainability criteria than luxury units.



Fig. 60: The affordable units in 18-storey Riverlight 6 are managed by Housing Association Viridian.

The purple tower, Riverlight 6, contains all the affordable homes, and was the first to be fully occupied, mostly by first time homebuyers already living in Wandsworth Borough, who were given preference. By taking advantage of Shared Ownership to access the London property ladder, families can now have secure tenure and own a tiny piece of one of the world's most expensive cities.

Like all housing subsidies, Shared Ownership is tailored to a certain sector of the market, in this case middle-income earners. The most common criticism levelled at the scheme is that most occupants never own the property outright, instead remaining answerable to the housing association. This means they can be evicted for offences such as non-payment, subletting (a unit they don't occupy) or unruly behaviour, and so risk losing their investment into the home. This caveat makes the scheme even less feasible for low-income households, usually social renters who, while eligible, typically earn less than a third of the upper threshold to qualify (90 000 GBP per annum in London) and struggle to access equity.

A further stumbling block for Shared Ownership has arisen recently in the way private developers are incorporating affordable units in projects. While there was no visible difference in Riverlight 6, it was built first and located along the western boundary as a buffer to protect the other five buildings from noisy 'super-sewer' construction taking place on the adjacent site. Since the completion of Riverlight Quay, development in Nine Elms has boomed. Subsequent project teams have paid little attention to the affordable housing component, relegating these units to separate, ill-considered buildings on the least desirable portion of sites, for example overlooking railway lines (Wainwright 2021). Nadeem Iqbal, the shared owner of one such unit, describes to *The Guardian*'s architectural critic how he accesses his 2-bed flat in Embassy Gardens—which has a swimming pool hovering ten storeys in the air that he can only gawp at—past a grand entrance flanked by Qatari supercars, around the back, past more construction work to a small 'poor door' sandwiched between air vents and bins. "I grew up in South Africa, a country that was racially segregated, but in London there is still really bad class segregation. We have a mortgage and we pay rent, but every day we are made to feel inferior, like the have-nots of Nine Elms".

Wainwright is heavily critical of how the exclusive new district is turning out, describing it as "a place of two communities, with a bitter sense of division nurtured by the very fabric of the neighbourhood", and an "international investor's playground where regular Londoners are pushed to the very edges, or cut out of the picture altogether" (ibid). It took just five years, he says, for market forces to jettison any hope of a genuinely mixed-income feel in Nine Elms.

But this does not discount Shared Ownership as a mechanism for introducing mid-tier residential space into cities. It is also worth considering how some aspects of the leasehold model might be introduced into other ethical, mixed-use development models to broaden the variety of housing on offer.

The New Japanese Communal

The discussion around the pros and cons of freehold versus leasehold homes begs one question: Why, in today's economic climate, do we still consider it necessary to own a piece of ground? Affordable flats come with restrictions, such as pet ownership or renovations, but so do market-rate ones. Both unit types offer near-identical use value in terms of lifestyle, and while a leasehold unit has more limitations, unless an owner plans to rent it out, let it stand vacant, buy up multiple units for speculation, or throw raucous parties, what use value does home ownership actually add? A similar argument can be made for the objects we use in our daily lives. A world where every household aspires to owning a private car, a washing machine and a set of power tools, is one of infinite duplication, not just of *stuff* but of the space to store that stuff.

Awareness of the need to reduce unnecessary consumption of goods has spawned the 'sharing economy' (Maak 2015: 139). In the same way we stretch resources further by timesharing, ridesharing or codesharing, what new prospects might exist for sharing space in cities? (ibid: 140). And how might residential space be opened up, collapsed, and overlapped to fulfil multiple functions for diverse users? These questions, answered in part by projects like Kalkbreite, become even more pressing in a society where inequality is rife and urban space is segregated and fragmented. It is in such places, I believe, that sharing holds the greatest promise.

Communal living has always existed outside of mainstream Western ideals: the solidary commune in which no individual freedom or solitude can be found is contrasted with the pursuit of self-determination and privacy (ibid: 130). The libertarian worldview sees the individual or nuclear family as independent of the State and in competition with others, while the communitarian worldview sees the cell as porous, behaving co-operatively with others as part of a greater living organism. The latter calls to mind the hippie communes and activists' squats—experiments in Utopian collectivism where sleeping was the only activity afforded separation, and everything else took place in shared spaces, using shared equipment. Through the 20th century, these disparate ideologies came to be mapped onto two opposing politico-spatial conditions.

Democracy, represented by the social isolation of the single-family suburban house in a "computer-traffic-snarl-afflicted conurbation", contrasts with the anonymous industrialised mass housing blocks, the "inhuman concrete shelves" associated with Eastern Socialism and Communism" (ibid: 133). Where one stands with respect to these alternate realities is closely linked to notions of private and public. In societies that champion individualism, something private tends to be viewed as superior to that which is public: the desire to call something one's own is fed by a culture that praises asset accumulation. But what forms of ownership are important to individual identity, and what can be ceded to others to make room for more meaningful things in life? (ibid: 140).

The book *Living Complex* gathers theories, practices and projects that "provide an outlook on how we could rethink publicness and privacy and, as a result, dwell and live differently" (ibid: 39). Examining the definition of privacy, Maak traces the roots of the word 'privacy' back to an aggressive concept: "[T]he Latin word *privare* means 'to rob', so being *in privato* thus means being in a space previously wrested from a collective, a space that thereafter must be defended against intrusion by the others. Here the private sphere becomes something that is effectively stolen from the community, made inaccessible to others in order to become 'home' to us" (ibid: 167). He illustrates the inversion of private and public in the digital age with a vignette in which a person spends the day alone in their flat, working, meeting, shopping and socialising online, then goes out for a stroll in the empty night streets to clear their head and be alone with their thoughts. Does this constitute moving from the private realm into the public, he asks? "Or is he or she looking for an intimate, private moment of reflection outside after spending the day doing—with the aid of various technological media—what in antiquity took place in so-called public space: exchange of information, trade, debate?" (ibid: 32).

Bos (2012), writing on the contemporary megacity, speaks of a new sense of being at home in urban public space, whereby the "sensory experience of being in movement and of spending time in in-between places is as familiar and recurrent as being in a single place". She speaks of the 'phenomenological topography' of today's cities, one that de-emphasises person-to-person sociability in favour of visibility, and invokes objects and structures as the bearers of visual and spatial connections. Wearing pyjamas to the shop, getting a haircut on a sidewalk or being baptised on a beach, are examples of everyday behaviours that articulate in new ways "the spatial and visual relations between both people, and people and things."

If, as these scholars have done, we assume a different understanding of the private/public dialectic in which a distinct binary is replaced by a continuum along which all space exists, what implications does this have for the design of homes for the future?

In residential architecture, thresholds between private and public depend on a building's form and typology, and on the relationships between inhabitants, their neighbours, and the surrounds. A freestanding suburban house clearly delineates space with a physical boundary (wall or fence). In dense urban environments where space is limited however, buildings must take advantage of the third, vertical

dimension to maximise efficiency, and they need responsive, flexible envelopes that can react to changing conditions, letting in light, views, and air while keeping out harsh weather, prying eyes, and intruders.

Japan today has many examples that transcend conventional architecture, reimagining notions of private and public to reorganise housing in radically different ways (ibid: 27). Two recent projects in Tokyo demonstrate how architect Ryūe Nishizawa of SANAA reconceptualised the single-family dwelling. The first, a townhouse in a built-up area, masquerades as a miniature high-rise (ibid: 115). Configured as a 2-bed live/work unit for writers, it is easily rearranged to accommodate other uses.



Fig. 61: This compact freestanding house looks like a vertical garden and brings the calm of nature into the bustling city.

Nishizawa responded to the tiny site—only 9m x 4m in size and hemmed in on three sides—by stacking a series of identical concrete floor plates, slightly set back from the boundary and connected centrally by a semi-spiral staircase. The walls, recessed from the street to create deep, open balconies, are all glass. Sliding doors and pocket gardens dissolve the indoor/outdoor divide, and fabric curtains and plants screen occupants while allowing air and light into all spaces. The façades can be operated to achieve openness or intimacy depending on usage and time (Maak 2015: 115), and the slick, modern home has the same permeable lightness, simplicity and efficiency seen in traditional Japanese houses, with their layered multi-functional spaces.

Such architecture, says Maak, brings welcome respite at a time when urban development and attitudes towards public space are characterised "by hysterical security efforts" (ibid: 113). It must be qualified that Japan has very low crime rates, ranking 9th safest out of 154 countries, while South Africa is the third most dangerous (*www.numbeo.com* 2020).

Locally, Nishizawa's architecture—devoid of solid walls, gates, and burglar bars—might seem absurd, but that doesn't mean we cannot learn from it. The positive implications for spatial justice and urban inclusivity would be huge if local designers crafted defensible space using timeless, universal design principles, instead of erecting ever-higher barriers.

The second Nishizawa building of interest, Moriyama House (2005), was commissioned by an eccentric middle-aged man who demolished their traditional timber house after his mother passed away, and rebuilt on the same plot (Moriyama-San 2017). Initially he wanted one unit to live in and another to rent out, but over two years Nishizawa designed an unusual dwelling that resembled a mini city (Maak 2015: 145). Ten white cuboids of one-to-three storeys are arranged in a rectilinear fashion around the site, and between them "a landscape of paths, courts, and niches unfolds, cascading unhindered on all sides into the public alleys of the district" (Fitz 2005). The site houses five separate rental apartments with floor areas between 16m^2 and 30m^2. Their compact, no-frills design makes them affordable, renting for less than half market rates, and they attract a wide variety of tenants. These tenants are not just a source of income for Mr Moriyama, but have become an unrelated extended family of sorts (Moriyama-San 2017).



Fig. 62: Deconstructed Moriyama House looks and feels more like a living landscape than a house in any traditional sense.

Each level of each box contains only one room (excluding storage and wet areas), and the client occupies the largest pavilion, with its own kitchen and bathroom in separate boxes reached from outside (Fitz 2005). Large picture windows barely need curtains, as they are staggered and naturally screened by carefully-placed building volumes and greenery. Residents choose how much they socialise with neighbours, whether they just greet in passing or

join for an outdoor movie evening, screened on the side of a pavilion (Moriyama-San 2017).

In this project, private/public and indoor/outdoor thresholds blur, validating a way of living that is becoming ever more common, but for which few containers exist. In some developed countries such as Germany and Japan, nuclear families are now outnumbered by singles and small households (Maak 2015: 136). Globally, economic recession has meant more young adults stay on in the family home, and elderly relatives move in with younger family members to provide childcare or to be cared for. It is also increasingly common to find non-traditional family structures co-habiting: same-sex or gender fluid couples, polygamous and polyamorous groupings, two single parents moving in together with their respective offspring or 'timesharing' children between two homes where they spend equal amounts of time. These changes hardly reflect in housing policies, and so the disconnect between the type of homes on offer and the lived reality continues to grow (ibid: 137).

Yoshiharu Tsukamoto of Atelier Bow-Wow, in a treatise supporting new forms of collective living, envisions a city organised into zones which Maak describes as "micro-villages where the retiree, the other children, the unattached graphic artist constitute a surrogate family for the child whose father works in a different city from Monday to Friday, for the widower, for the visitor" (ibid). As in Moriyama house, it is the in-between spaces, those classified as 'semi-private' or 'semi-public', that serve to bridge between the extremes and not just fulfil occupants' material needs but also fill the social and emotional voids characterising our 'post-community' world.

Old stereotypes of communal living have been completely revisited, and barriers between dwelling and city dissolved in the Yokohama Apartments by ON design partners Architects. The building is a shallow box containing four separate, near-identical studio flats or 'huts' of around 20m^2 each, floating two storeys above the ground, and supported by four narrow wedges around and through which the lightweight staircases weave, allowing separate access to each apartment from outside. Landings and perimeter walkways double as small private balconies for each unit. The 'towers' contain storage and a guest toilet on the ground floor, and the rest of the space is communal. Here the four tenants can cook, eat and relax together or alone, or host a party.

With no way to properly close off the ground floor from its surroundings, the dwelling flows into the city, behaving in some ways like an old Italian-style *piazzetta* or other small public space (ibid: 194). The autonomous floating apartments each have their own bathroom and kitchenette, again allowing occupants the freedom to decide when and if they want to participate in group activities. The house encourages spontaneity and camaraderie, while respecting occupants' rights to "privacy, withdrawal, and the personal" (ibid: 133).



Fig. 63: Yokohama Apartments radically challenges pre-conceived notions of public and private enclosure.

Conclusions

Fleshing out the theoretical framework assembled in Chapter 2, this chapter described examples of how collective housing is produced, and suggested some parameters for integrated, spatially just housing in the local context.

First, any new model must be compact in response to the need for middle and upper-class South Africans to consume less land in cities. Density is now also recognised as a key requisite for State-subsidised housing in South Africa. While property markets and nimbyism make well-located city land difficult to secure for low-income development, this might in fact be a blessing, as most new-build housing projects are large-scale and homogeneous both in terms of their architecture and inhabitants, making them unlikely to integrate with surrounding places and people.

This leads to a second criterion for new housing: it must be diverse. To be inclusive, all new housing should cater for at least two income groups and offer a minimum percentage of affordable units, depending on the area and local needs. Locally, this is perhaps the most powerful tool for fostering racial integration. Here, diversity not only implies a mix of people living side by side in homes of similar quality, but also a mix of tenure options, dwelling sizes and designs, and a mix of non-residential functions—commercial, educational, or recreational—in a single building or compact complex. Conradie Park in Cape Town exhibits strong commitment to diversity, helping demonstrate that high quality MI housing is achievable here, and also identifying the type of sectoral partnerships and funding mechanisms that make it possible. Despite its positives, one of the

project's shortcomings is missed compaction targets. Aiming for 'high-rise, high-density', the project is medium-rise and straddles the threshold between low and medium densities, thanks to a lack of one thing: height.

A third criterion for new urban housing, then, and potentially the most powerful in spatial terms, is verticality. Building up is a question of scale and integration; It enables high residential density to be achieved within a small footprint, making more inner-city sites developable. Reducing the minimum scale for housing construction to be feasible means urban fabric can be produced incrementally, responsively, and at lower risk. The increased façade area of high-rise buildings presents opportunity to express a unique identity in relation to other city forms, and offers more surfaces, at and above ground level, for the building and the city to engage. Conceptually, verticality also speaks of grandeur and wealth, of upliftment and rising above the ordinary. But high-rise development is not cheap, and requires considerable expertise in design, construction and maintenance to deliver the desired outcomes. This brings us to one final difference in our new housing model: the *way* it is produced.

"Times are good for architects" says Maak (2015: 222), citing a global rise in new approaches to housing production. I disagree, believing that architecture generally, and more specifically in South Africa, is suffering a sort of paralysis. New movements, styles, and innovations in building design do exist, but seem unable to gather enough impetus to enact lasting change before they are made redundant by new technologies or the latest global crisis. More buildings are built every day—diluted repositories of past forms and operational modes that signal the industry's failure to keep up. Unless it is redefined, the profession of Architecture is, I posit, in danger of disappearing. To this end, Architects will need to step down from our pedestals to embrace roles as facilitators, as interpreters, and as the fixers and healers of cities. Our greatest assets going forward will be the dexterity with which we navigate uncertainty, the speed at which we innovate in response to urgent socio-spatial problems, and our ability to work with others. The genesis of solutions grounded in established places, people and social formations is seen in cross-cutting collaborations like the CCE's residency programme in Cincinnati, or Kalkbreite co-operative housing in Zürich—horizontal modes of learning, doing and making that validate the full range of urban actors, laying fertile ground for partnerships to germinate and flourish across the public-private continuum. Built environment designers and decision-makers have a duty to immerse themselves in the contexts in which they operate, understanding 'lived' and 'perceived' spaces and incorporating local knowledge in their work. Lastly, it is vital that we explore new ways to articulate and represent this knowledge and share it with others. At this point, the reader is asked to shift for a moment from present to future, from the descriptive mode to the normative, to imagine a new kind of residential building, a 'host organism' for the contemporary urban community—one that welcomes and celebrates difference, nurtures wellbeing, and embodies African traditional values of collectivity and empathy. I will call it a VERTICOLAPA, derived from:

vertical tall; high-rise

co- collaborative; communal; co-operative; compact *and*

lapa an indigenous Southern African word that refers to an open built structure and translates equally to mean the family, the land on which a family dwells, or the area of yard outside a house's front door

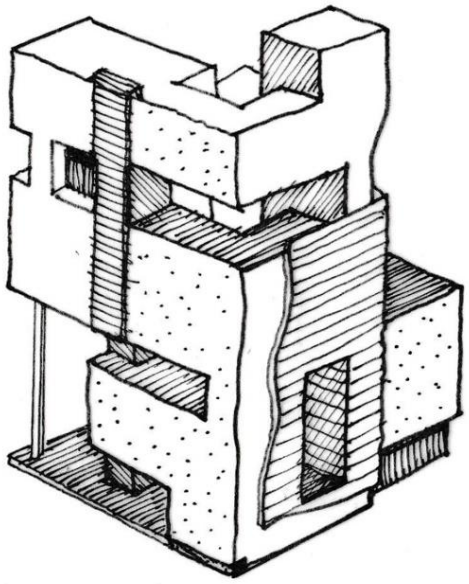


Fig. 64: The new 'animal' in the 'urban jungle ecosystem'.

Before moving onto the methods and findings of the present study, I will dedicate Chapter 4 to reviewing a panoramic range of writings and studies—past, present, local and international—pertaining to the residential high-rise. In structuring the large volume of information presented, I asked: 'What do we already know about the Verticolapa?' In answer: 1. That it is tall; 2. That it sits in an urban environment where, as established in Chapter 2, it is critical to engage with density; and 3. That it will need to host a variety of residents with differing socio-economic profiles. As such, the sections of the coming Chapter are framed around three key separate but intrinsically linked qualities: verticality, density and diversity.

Chapter 4:

Living in a Rainbow Sky

Qualities of a Verticolapa

> "The sense of gravity is the essence of all architectonic structures and great architecture makes us aware of gravity and earth. Architecture strengthens the experience of the vertical dimension of the world. At the same time as making us aware of the depth of the earth, it makes us dream of levitation and flight."
> (Juhani Pallasmaa 2012: 67)

In Christopher Alexander's *A Pattern Language* (1977), Pattern #21 begins: "There is abundant evidence to show that high buildings make people crazy." And that is that—tall buildings are not considered in any of the work's other 252 patterns. This reflects the prevalent view in society at a time when the high-rise had been demonised, following the large-scale failure of social housing projects in Europe and America. Forty years after its publication, millions of people worldwide live in high-rise buildings, and the Modernist 'concrete box' has come a long way across countries and cultures, with most contemporary apartment blocks bearing little resemblance to their forebears (Jacobs 2006).

Today, verticality is a powerful device in the densification and upgrade of city cores, countering the damaging horizontality of urban sprawl. Building *up*, not *out*, and limiting the footprint of human settlement as Soleri (1969) urged us to do half a century ago, is now understood to be a more sustainable and responsible way to develop.

When verticality and compaction are employed, however, it is usually to generate profit and create exclusive spaces, not to further the ends of social or environmental justice. Architectural innovations to this end are scarce, with few examples of 'open system' high-rise housing that supports the socio-economic variety found in cities. Might it be a task, then, to formulate a pattern language more relevant to this place and time—the Global South in the Urban Age—when most humans live in cities and countless city-dwellers live in high-rises?

The first section of this chapter explores how cities' upper reaches came to house populations, and how social class maps onto that. A more technical look at form and function in residential high-rises lays the basis for a review of research into its suitability for human habitation, and the ways in which height influences the dwelling experience.

The second section unpacks the different scales and types of density found in cities, along with their positive and negative implications. Comparing the figures and thresholds acceptable to different populations, it questions appropriate development targets in the local context.

The third section covers diversity in all its forms. Summarising the term's application to the scope of functions and uses of a variety of buildings and urban spaces, it discusses the mix of people enabled by such conditions and the different ways in which they cluster to form social groupings. Finally, an enquiry into the social landscapes found in residential high-rises captures the ways in which neighbours engage, and looks at how interactions are moderated by human similarities, differences, housing form and design.

VERTICALITY

A fully volumetric urbanism, argue researchers Graham and Hewitt (2013), is needed today—one that addresses how "horizontal and vertical extensions, imaginaries, materialities and lived practices intersect and mutually construct each other". The coming pages will explore the vertical dimension: its meaning and symbolism over time, application in the built environment, and effect on those inhabiting it. How might we reimagine verticality with respect to multi-family housing? Who is accommodated in what way, and how might the skies be claimed as a happy, healthy collective habitat for the common person?

Power and Privilege

> "Seeing Manhattan from the 110th floor of the World Trade Center. [ ] A wave of verticals. Its agitation is momentarily arrested by vision. The gigantic mass is immobilized before the eyes. It is transformed into a texturology in which extremes coincide—extremes of ambition and degradation, brutal oppositions of races and styles, contrasts between yesterday's buildings, already trans-formed into trash cans, and today's urban irruptions that block out its space." [...]
>
> "A poster, sphinx-like, addresses an enigmatic message to the pedestrian who is for an instant transformed into a visionary: It's hard to be down when you're up."
> (de Certeau, 1984: 91-92)

This evocative description is referred to in most every piece of scholarship on urban verticality. In *The Practice of Everyday Life,* de Certeau elucidates the other reality implied by being 'up': that of being 'down', walking amidst the proletariat and their implied struggle for survival. The 'up' is not absolute but relative, a term steeped in notions of superiority and privilege. 'Up' is the infinite, divine realm, where we look for guidance and give thanks. 'Down' is finite, where mortal shells remain when souls have ascended. Even before this dichotomy was described scientifically, humans were building as high as they could to get closer to God, and settlement skylines were dominated by steeples and minarets.

Habitation renders this picture more complex. Historical geographer Richard Dennis describes how, in pre-industrial times, "the poor lived in the attic, farthest from the street-level toilets and water supply; the rich occupied flats on ground and first floors, with higher ceilings, larger windows and fewer stairs to climb" (Harris 2015). The vertical stratification of social classes was largely reversed by the late-19th century, when structural steel frames and passenger elevators enabled the building of ever-higher edifices. "'Up' as a habitable territory had to be made, sometimes forcefully but always without precedent" writes Sayre (2011) in telling how Elisha Otis, in modifying a railroad brake to halt a lift car should the cables snap, paved the way for the "colonisation of the up".

Dennis (2008) describes the first high-rise block of flats in London, the developer-built 13-storey Queen Anne's Mansions (1890). At a time when most flats were five or six storeys, the structure met with resistance from the public, who found it "Babylonian in scale, and also 'Babel-like' in gathering hundreds of people of different ages, experiences and origins under one roof" (ibid). Concerns were raised around fire safety, structural stability, and overshadowing. Despite this, successive applications were made to LCC for extra floors and wings *after* construction began, a fraught process credited for the introduction of height restrictions to London's building code (ibid). In 1973, *The Time*s described the development as "all very novel and, socially speaking, revolutionary", referring to the proposed "co-operative living, the absence of private kitchens [ ] and [the] communal dining and recreation facilities" (ibid). Located near St James' Park and marketed to "bachelors of means", the Mansions were state-of-the-art, with 24-hour hot and cold water, and speaking tubes. The 1901 census recorded 237 residents, including 15 children, in 132 households, supported by 206 in-building servants.

Yet despite the lift, views "barely compensated for the anxieties of height" (ibid). Verticality's newness at the time was captured in *Flats* magazine, which reported that rents in walk-up residential buildings decreased by about 10% per floor above the first floor, and even with a lift, tended to decrease with vertical height (ibid).



Fig. 65: US artist Joseph Pennell's 1904 drawing of Queen Anne's Mansions. Its size and plain brick exterior meant it was called 'ugly', 'inexcusable', a 'horrible phantasmagoria'.

The first American skyscrapers—like the Home Insurance Building in Chicago (1885)—were commissioned by corporations and banks as offices for those managing and reproducing their capital. Down below, hordes of blue-collar workers grafted in factories and shipyards, returning at night to grimy, overcrowded tenements. The high-rise developed mainly for commercial functions, and was a well-established building form in big US cities for over 40 years before Modernism took hold in Europe (Firley and Gimbal 2011: 17). "It would be fair to say that the typical metropolitan American white-collar worker commuted from his family home to a high-rise office, while his European colleague left his tower apartment in the morning to spend the working day in a low-rise *fin-de-siecle* building" (ibid).

Post-WWII, the need for mass housing led to the high-rise finding widespread favour. Le Corbusier's Utopian visions of identical, soaring towers nestling in lush gardens and reached via raised roads and walkways represented a clean, ordered future where separate zones and open spaces catered for large numbers of similar, well-behaved citizens. This, it seems, is where it started to go wrong for the high-rise—human beings are not all alike.

As verticality was co-opted by governments on both sides of the Atlantic, social housing 'projects' (US) and 'council estates' (UK) proliferated. Built cheaply, on a massive scale, and in peripheral locations, the dormitory developments quickly became islands of relative poverty. But not all social housing was made up of 'tower blocks', as they were known in Britain. Hanley's *Estates: An Intimate History* (2012) tells of growing up in a council estate on the outskirts of Birmingham, where the best-off families (up to 60% AMI) were allocated semi-detached units, the next tier down received terraced (row) houses, and the worst-off were put in tower blocks. The poorest once again occupied the 'up', and so the residential high-rise, through replication and careless application, became synonymous with urban poverty. The mute Modernist slab became a scapegoat.

Those who could afford it pursued low-rise living in central neighbourhoods or freestanding suburban houses, and the dismantling of dysfunctional housing projects began. Several towers were demolished, and others were renovated. About a third of UK council flats were sold off in the Right to Buy scheme of 1980, and many more converted to affordable inner-city housing for moderate earners, creating an organically derived landscape of mixed tenure—and mixed-income—housing in UK cities. More recently, failed council estates have been sold to developers for lucrative renovation, typically by part demolition and infill construction, into mixed-use complexes that combine affordable and market-rate units, potentially catalysing the transformation of urban areas.

Despite the tarnishing of the high-rise's public image, the notion of a superior 'up' prevailed. Class stratification is recorded in a 1930s fragment written by a Max Horkheimer, likening a skyscraper to a "verticalised capitalist society" with the "feuding tycoons" at the top and the unskilled, unemployed below (Harris 2015). The apocalyptic novel *Nineteen Eighty-Four* describes the four Ministries of Truth, Peace, War, and Plenty, from which society is constantly surveilled, as "enormous pyramidal structure[s] of glittering white concrete, soaring up terrace after terrace, three hundred meters into the air" (Orwell 1949, cited in Bernstein 1985). Winston, the story's protagonist, works in the basement of a tower that has "long windowless halls, with a double row of cubicles" and returns daily to crumbling Victory Mansions where the paint is peeling, the plumbing and heating inadequate, and the lift seldom works—nods to the squalid working conditions of Victorian London and the high-rise worker housing built between the two world wars. The architecture and urban realm of Orwell's dystopian future serve as a metaphor for totalitarian repression (ibid).

In another example, J.G. Ballard's 1975 novel *High-Rise*, adapted for film in 2006, is a literal interpretation of the vertical social stratification of space (Hall 2015). The dystopian tale tells of the demise of a 40-storey tower housing 2000 people, where the rich live on the top five floors, the middle class on levels 10 to 35, and the working class on the bottom nine. A reviewer recounts how the "small vertical village" descends from civilisation to tribalism to hunter-gatherer savagery (there is even a suggestion of cannibalism), in a kind of mass psychosis where they retreat from the outside world" (ibid).

These examples capture well the mysterious power that tall buildings have in and over our urban fantasies.



Fig. 66: WAI Think Tank's *Project 1984* reflects on the power of architecture to symbolise extreme socio-political scenarios.

In regions where the high-rise was not used primarily for mass housing, vertical stratification played out differently. Rapid urbanisation of geographically constrained megacities like São Paulo criss-crossed with colonial and Modern infrastructure, led to the widespread adoption of high-rise *condominia* as homes for the middle and upper classes. Condos in Brazil are always gated, and are protected by perimeter walls, security guards and CCTV. This is because, like South Africa, Brazil has high crime rates resulting from past exploitation and high inequality (Gini=0.53, *statista.com* 2020). Unlike in South Africa however, the absence of separatist legislation resulted in contiguous urban patterns, with the poor intermingled across city space and squatting pockets of land on hills and in valleys too steep to develop.

Here, medium-rise *favelas* sit immediately beside the most valuable city land, and in some cases, the poor look down on the rich from self-built homes.

In São Paulo, the sea of high-rises has made horizontal movement difficult. In answer, high-speed underground metro trains link vast multi-level stations, and private helicopters ferry the elite from airports to meetings to home (Graham and Hewitt 2012: 84).



Fig. 67: Favela Cantagalo, reached by new elevator towers connecting into the subway, overlooks well-off Ipanema, Rio.

In island nations, land scarcity led cities to become overwhelmingly vertical. In Hong Kong for example, almost everyone lives in a high-rise, regardless of social status. Here, a visual flattening of social hierarchy occurs, but in terms of environmental politics, vertical stratification arises out of the disparate air quality at different heights (ibid). In polluted cities, heavy carbon emissions emanate near the ground and the 'heat sink' effect settles the smog in low-lying areas, so the higher one goes, the cleaner the air.

Choy (2010) describes Hong Kong's unequal spatial distribution, where expats and upper classes occupy hilly districts and there is "a geographically uneven distribution of environmental harm, where the rich have access to good air, while the poor are relegated to the dregs, to the smog and dust under flyovers or on the streets" (ibid). In most big cities today, it is common to see clusters of luxury high-rise apartments, just completed or under construction, marketed with phrases like "pin-drop quiet" or "loft floating 28 stories above Lower Manhattan" (Zukin 2010 cited in Graham and Hewitt 2012). They offer "sky gardens and plazas" and are sold as vertical cities containing all the modern cosmopolite might need. Such luxury offerings feel like a logical typological progression in First World cities, but in the visibly unequal cities of the developing South, the stark contrasts between *up* and *down*, *haves* and *have-nots*, becomes unsettling. Graham and Hewitt (2012) discuss this 'vertical secession' and its implications. The proliferation of high-end high-rises, they suggest, could spawn "a myriad of vertically stratified, gated 'communities' which residualize the surface city as powerfully as exurban gated communities residualized traditional public street systems". Mumbai's luxury residential skyscrapers are advertised with phrases like "The same address as God" and "The higher you go, the cooler you get"—language that implies an exclusive nirvana above the indigent masses in the dirty, noisy streets below (ibid). Tracing this reference to the raised pedestrian walkways of post-war North America, Harris (2015) cautions us against transplanting urban space theories between dissimilar contexts. While Mumbai's raised walkways offer respite from poverty and crowds, he says "the premium spaces are below, with skywalks built to try to 'suck' hawkers and pedestrians up from traditional street systems and allow unencumbered passage for elite private vehicles" (ibid). He argues for "more cosmopolitan theories of vertical urbanisms that [ ] encompass the differing street cultures, social relations and planning systems of Southern cities" and for more rigorous study of lived realities to find "ethnographic detail to open up the variety of experiences, imaginaries and practices of vertical urban life" (ibid).

This is one aim of the present work.

Form and Function

Multi-storey urban residences date to Roman times, when street-facing apartments of four to five storeys were built of loadbearing masonry. Romans put their invention—concrete—to good use in their civic and religious buildings, but did not apply it to the humble dwelling (Craighead 2009: 2). Lost in the Middle Ages, knowledge of concrete was unearthed again in the Renaissance, and by 1700, Paris had over 20 000 apartment blocks of between five and seven storeys housing up to 25 families (Laurens 1954, cited in Gifford 2007). The discovery of reinforced concrete, Otis's hydraulic elevator in the 1850s, and Siemens' electric elevator in 1880, meant that 15-storey buildings were common by the 1920s. The first residential skyscraper, 41-storey Ritz Tower in NYC's Park Avenue (1926), was half hotel and half apartments. At time of writing, the tallest building in the world is the mixed-use Burj Khalifa (2010) in Dubai, at 160 storeys.

How tall is a high-rise? 'High' is relative, but for our purposes a workable definition is important. One accepted criterion is that high-rise users rely on a lift for vertical circulation. In terms of linear height, a book on fire safety defines a high-rise as a structure that "extends higher than the maximum reach of available fire-fighting equipment. In absolute numbers, this has been set variously between 75 and 100 feet, or about seven to ten stories" (Craighead 2009: 2). The *US Life Safety Code* specifies a high-rise as any building over 23m. Durban Fire Department considers any building

over two storeys a high-rise, but the vertical reach of their hoses is around 22m (pers. comm. 2018). Based on this, I offer that a high-rise building is any enclosed structure with an elevator, and which has a minimum height of seven storeys, or 22 metres.

The primary use of a residential high-rise is long-term human habitation. Other functions—like short-term residential (hotel) or commercial (shops, offices)—may be included, in which case it is classified Mixed Use (MU). Independent dwelling units with their own kitchen and bathroom are called flats (UK) or apartments (US), and a cluster of three or more units is a block. Geographer Jane M. Jacobs, in her work on the residential high-rise (2006), calls it a "big thing" to avoid the "constructivist force of those more coherent terms like architecture, building or housing [ ] that predetermines specific understandings, as it precludes other kinds of knowing".

Despite infinite variations and no consensus on the classification of high-rise forms, I will define some typologies here to aid in describing the findings.

1. POINT TOWER: A high-rise taller than its footprint. Floors tend to be symmetrically or radially planned, with units clustered around a central circulation core. Habitable spaces are ventilated from one side and circulation passages internalised. Towers tend to be airconditioned MU skyscrapers or office buildings.

2. SLAB: A building that appears as a wall or plane. Hotel or office slabs are often double-loaded with an internal corridor, while residential slabs are usually single-loaded with an access passage on one side. Slabs typically have a lift/stair core at one end and Fire Escape (FE) stairs at the other, or a central core with FE stairs at either end.

3. DOUGHNUT: A building with a hole or open courtyard penetrating vertically through the middle. Outward-facing units are accessed from passages around the inside. Lift and FE cores are usually opposite each other, protruding into the courtyard or poking out of façades.

4. LETTER: A high-rise with a more complex form that 'grows' out of a footprint resembling a letter of the (not necessarily English) alphabet. Usually a response to site constraints like plot geometry or view corridors, letters can combine two or more of the above typologies. 'Strokes' of a letter can be different heights, but usually share access and escape routes.

These typologies are not exhaustive, and fall short of describing a small percentage of cases. One is a hybrid building with dissimilar structures built years apart, say a low-rise mansion block (1920s) and high-rise Modern slab (1960s), where the two wings—which may not be laterally traversable—share a name and entrance. Another is a complex. These are created by joining two or more existing buildings together with a large base like a parking or retail structure. A complex will have a single secure entrance, but its buildings may retain a sub-identity annexed to the block's name, e.g. Bencorrum Mews or Towers.

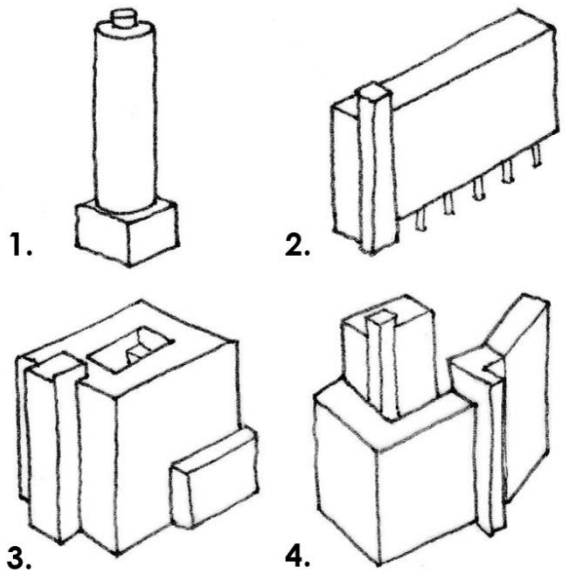


Fig. 68: A sketch showing four common high-rise typologies.

A tall building's form rarely comes from merely extruding the footprint to a determined height. Most have a different condition where they meet the ground, appearing to grow out of a base or 'podium'. Inner city areas have a maximum permissible height for podia, which often extend to the plot boundaries, before the envelope must step back. This allows daylight to reach the street, ensuring users don't feel oppressed by a wall of tall buildings, and reduces the wind tunnel effect caused by air forced through gaps between buildings.

A podium can be partly or entirely integrated into a building's footprint, attached to its side, or absent. Often it extends into the ground as basement parking, restricting the structural grid (and hence planning) of the building above and increasing construction and operating costs, as basements require tanking and continual pumping. In coastal areas, particularly low-lying tropical ones, water ingress from rising sea levels, storm surges and wind-driven rain present possibly the greatest challenge where high-rises meet the ground.

A building can also be raised up on columns or *pilotis*, with only the entrance and vertical circulation cores touching the ground. This technique, first used in Le Corbusier's Villa Savoye (1929), frees up the ground plane so the landscape 'flows' under the building. Locally, where pilotis are used, the ground plane usually has covered, caged or open surface parking secured by a perimeter wall or fence. With respect to security, high crime rates mean that blocks of flats here need to be gated, much like Brazil. This was not the case when most Beachfront high-rises were built, and the retrofit of multi-level security systems (electronic gates, doors and discs, scanners, CCTV,

guards) and visible barriers or deterrents (fences, walls, electric/razor wire, spikes, bars) have impacted the way blocks of flats look and function. In well-off neighbourhoods, buildings tend to be in good physical condition and their security systems are tight and multi-tiered. In run-down city areas, blocks can be found in all states of disrepair, and tend towards an ad-hoc appearance resulting from a collage of makeshift window coverings. In such blocks, security ranges from patchy, to informal, to non-existent.

Suitability for Dwelling

Writer Jane Jacobs strongly disapproved of the way mid-20th century planners like New York's Robert Moses destroyed large portions of dense old city fabric to install flying expressways and mass social housing projects (Citizen Jane 2016). Developments typically included thousands of units built on tight public budgets, stripping the architecture down to the bare minimum and reducing it to mute-coloured boxes repeated *ad infinitum*. Based on the European 'towers in a park' model, projects had little or no semi-public space between domains that were completely private (the unit) and totally public (the grounds). Without spaces suited to children and the elderly, or cultural practices and activities, social and support networks struggled. The standardised, modular layouts and limited range of unit sizes and types worked against personalisation and the formation of place-identity. Yet while public opinion saw residential high-rises as places to be avoided, Jacobs was unique among her contemporaries in *not* condemning this housing form outright. "Elevator apartments," she says, "are not only the most efficient way of packing people on a given amount of land. They can, under unfavourable circumstances, also be probably the most dangerous way of doing it, as experience in many a low-income housing project shows. In some circumstances, they are excellent" (Jacobs 1961: 213-4). Here, her conclusion matches the 50 years of empirical studies that followed: the suitability of the residential high-rise for human habitation depends entirely on its context, how it is designed and run, and who lives in it.

In the 1970s, the failure of social housing projects on both sides of the Atlantic led to studies investigating the suitability of tall buildings for human habitation. Early studies compared similar populations in buildings of different heights, and while they overall established that high-rise living suited certain groups, other evidence was inconclusive or conflicting.

One paper on housing and mental health reviewed 18 studies (between 1972 and 1991) comparing the wellbeing of occupants of single family versus multi-family dwellings, and high-rise versus low-rise dwellings (Evans *et al.* 2003). Outcomes suggested that high-rise dwellers displayed poorer mental health, particularly related to anxiety and alienation. Isolating the studies that considered unit floor levels, three quarters corroborated earlier findings, but results were much more nuanced, playing out differently for men and women and when factoring in children and unrelated others. Two studies concluded that high-rise-dwelling children generally exhibited more behaviour problems, while others linked this to gender or age. One study suggested that young children residing on high floors (14th to 23rd) were delayed in developing certain life skills, and another that they displayed more restricted play behaviour. Both issues had self-corrected by the time the children entered school.

A strong correlating factor with mental wellbeing in all cases, regardless of building form or height, was housing quality. Here, quality refers not to building design but condition—problems such as surface or structural damage, infestation or mould, as well as more subjective factors like dissatisfaction with flat size, layout or fittings. This was true whether comparing high-rises in different neighbourhoods, or high-vacancy versus low-vacancy blocks. As a home is first and foremost a shelter to keep us safe and dry, it follows that anything less can reasonably be expected to cause mental strain.

In a thorough umbrella review of the consequences of living in high-rise buildings, environmental psychologist Robert Gifford (2007) gathers numerous studies from around the globe. Having listed some of the high-rise's past charges, that it can cause "fear, dissatisfaction, stress, [ ] poor social relations [and] reduced helpfulness", he reminds us of its positives: great views, relative urban privacy, and peace. Well-located high-density living requires less resources to be spent on home maintenance and commuting, which can improve QoL by freeing up time and money for more meaningful activities (ibid). Other positives include more opportunities for social interaction and support, and—pivotal in the local context—increased personal safety when living alongside many others in a tall, access-controlled building.

Gifford summarises six main fears invoked by high-rise living. The first three are disaster-related (fire, earthquake and terrorist attack) and the rest concern people: the threat of strangers and associated crime, the possibility that the resident or someone they know will fall or jump from height, and the risk of contracting communicable diseases by sharing air and surfaces (ibid). Using fear—or worry, as I have called its gentler, more pervasive form—as a framework to interpret the effects of living in a certain building type reinforces its inverse correlation with QoL. On cross-referencing available studies, Gifford concludes that height above ground alone cannot be seen as detrimental to QoL or health, but that this depends on various "non-building factors [that] moderate the relation between living in a high rise and the outcomes" (ibid). Four key moderators he identifies are SES, a block's location,

how much choice among residences an occupant has, and how much floorspace is allocated to each household member. Four additional likely moderators are life stage, gender, culture and dwelling design. No study disputes that senior citizens and younger (single or childless) adults best suit high-rise living. Those likely to be least satisfied in a flat are stay-at-home mothers with young children, though this finding has many possible contributors, including isolation, struggling to maintain social or marital relations, and child safety concerns.

In her doctoral study on the meaning and effects of high-rise living for middle income families, environmental psychologist Elizabeth Mackintosh challenged the "widespread condemnation of high-rise housing for young families" on the premise that most research had investigated "low-income populations in poorly designed buildings, and/or in bad neighbourhoods" (1982: iv). She looked at three different fully-occupied East Manhattan sites, described briefly below.

STUYVESANT TOWN and PETER COOPER VILLAGE (1947), developed concurrently, contain between them 56 buildings spread over 25 city blocks, housing over 11 000 units. Gated and guarded, the complexes boast expansive, attractive, well-maintained grounds, let down by the building design. Containing a mix of double-loaded one, two, and 3-bed units, the red brick structures' rigid, repetitive placement make them look institutional, even prison-like (ibid: 57-71).

EAST MIDTOWN PLAZA (1974), developed by a housing co-operative following a 1955 law supporting affordable housing, has nearly 750 units. Consisting of two towers (22 and 28 floors) and several lower buildings (9 or 11 floors) with duplex units, the award-winning design uses articulated forms and contrasting materials. A range of apartment sizes (studio to 4-bed) and layouts are offered. Activity rooms and playgrounds serve residents only, but a landscaped plaza linking buildings merges into the surrounds. Site entrances are unguarded, but individual buildings are secured and the complex patrolled (ibid: 71-6)

The third group studied consisted of SINGLE HIGH-RISE BUILDINGS within the study area that did not share outdoor space or facilities with other buildings. Residents from 13 different blocks were interviewed, with care taken to include a variety of architectural designs to de-emphasise the influence of built form on outcomes. The resultant spread of buildings represents the choice available to middle-income families seeking to live in Manhattan at the time (ibid: 82).

Overall, the study found "high levels of satisfaction with the city, the housing development and the apartment" and concluded that the "demographic groups most attracted to urban high-rise living were families with employed women and people who had grown up in apartments" (Mackintosh 1982: iv-v).

Residents selected buildings to align with "self-images and aspirations based on what each site had to offer", so different populations naturally came to characterise the three sites. The sample, all middle-income, ranged from Cosmopolitans "with higher incomes (usually dual) [who] enjoyed lower density apartments, babysitters, housecleaners, private schools and vacations" (ibid: 163), to transients, to more traditional couples with lower incomes and aspirations to live in a suburb (ibid: 205).

Architectural appearance was a low priority, and buildings were instead selected for their condition, management and immediate neighbourhood. When it came up, Stuyvesant Town and Peter Cooper Village were heavily criticised, but residents appreciated East Midtown Plaza's excellent design, frequently citing it as a reason they'd chosen to move there (ibid: 296-7).



Fig. 69: East Midtown Plaza circa 1975. Height variations, novel geometries, rhythmic banding, and pop-out balconies create visual interest and relate to human scale.

Functionally, building design significantly affected both satisfaction and behaviour, particularly when it came to children. Sites with play facilities displayed more social interaction, and "involvement with neighbours and feeling a sense of community were significant predictors of satisfaction" (ibid: 334). Internal and terraced play facilities were used most, while East Midtown's publicly accessible plaza had numerous reports of user conflicts between residents and 'outsiders', including homeless people and 'rougher' kids from nearby low-income housing (ibid: 298). Residents of single buildings with no play facilities had more building-related complaints, spent more time indoors on weekends, and allowed children out to play less often and at a later age. Parents on higher floors had less visibility of children at play, let them out

less, and reported more domestic tension and lower satisfaction—yet high apartments were preferred for their views, light, and safety.

Indoor crowding, usually where four people shared a 2-bed flat (larger units were scarce), was the biggest indicator of dissatisfaction. Families in duplex units reported privacy levels twice as high as those with units on one floor, a factor of having children upstairs and parents downstairs. Those living lower down enjoyed better neighbourly relations, but had experienced break-ins (ibid: 334). To better cater for young families, the study recommends that designers provide more floor-level choices and larger (three and 4-bed) units, and make low level units "as safe and sunny as possible".

The Mackintosh study, although carried out long ago and in a different context, provides Architects with useful recommendations on the design of high-rise housing today. None are new, she says, crediting researchers before her, but were confirmed or elaborated upon by her results (ibid: 41). She concludes that "well-designed and well-managed urban high-rises not only provide an important and satisfying housing option for middle-income families, but also have a positive impact on family dynamics" (ibid: 340-1).

A later US doctoral study investigated the effect of floor level on satisfaction and home environment in tall apartment blocks. Across nearly 400 mail survey respondents, randomly selected across high-rise buildings in major US cities, it compared a unit's floor level against six factors: condition, safety and security, self-expression/place-identity, social interaction, management & maintenance, and neighbourhood qualities (Kim 1997). Unit condition and management & maintenance correlated clearly with satisfaction, but floor level made little or no difference. In well-designed and maintained high-rises, "these particular residents showed a high degree of satisfaction at all floor levels" (ibid: iv).

Studies on the high-rise's suitability for housing in the Anglophone world dropped off in the 21st century, and recent empirical research on this topic is scarce despite the relevance and current need. "[P]rogress cannot be made toward understanding the effects of living in tall buildings unless research is undertaken" says Gifford (2007), urging scholars to pursue more innovative research designs like meta-analyses and methods that account for curvilinear variable relationships. "The task of the architectural social scientist," he says, "is to discover which buildings are salutogenic or pathogenic for which people" (ibid). As a socially minded architect, I hope to contribute to this endeavour.

DENSITY

'Density' refers to the compactness of a substance, or the frequency of something's occurrence. It is a quality found at all scales and levels, from the microscopic (cell density) to the galactic (density of stars in the sky) and intangible (density of human interactions). This study is concerned with density as it pertains to human habitation: how many people reside in a given area of ground or floor space. Three types of density are relevant here:

macro/ POPULATION DENSITY: Used at regional and town planning scales and expressed as 'No. of persons per square kilometre' or pax/km^2, this counts all land in a district, city or metropolitan area including infrastructure, open space and non-residential areas.

midi/ RESIDENTIAL DENSITY: Typically used at neighbourhood or plot scale, this counts the number of individual dwelling units (e.g. house, self-catering apartment) found on a given area of land, measured in 'dwelling units per hectare' or du/ha.

micro/ INDOOR DENSITY: Used at dwelling scale, this counts the floor area apportioned to each individual. Calculated by dividing the internal floor area of a house or flat by the number of full-time occupants, it is measured in 'square metres per person' or m^2/person.

In 2013, Ethekwini Municipality commissioned a City Density Strategy for the Metropolitan area, and in 2016 released an Inner-City Local Area Plan (LAP) covering all spatial aspects to be considered in planning for 2040. The LAP advocates for increased density in Durban's inner city, noting that, in relation to economic regeneration, "densification creates opportunities to address many other problems beyond just accommodating large numbers of people; the key ones being to reduce inefficient sprawl, make public transport sustainable, and restructure our segregated city" (EM 2016).

This reiterates what was discussed in Chapter 2—that density is important for urban compaction, and can assist in addressing unequal, fragmented (unjust) urban landscapes. But the chasm between policy and lived experience is vast, so before any analytical or normative work is done, it is important to unpack the three spatial scales of density, to establish their positive and negative implications and their effect on the experience of city life.

Population Density

This speaks to city scale, and is most useful in comparing concentrations of people in urban areas to those in rural ones, or between different cities. It is

ideal for determining thresholds for social facilities and public transport (EM CDS 2013).

Durban's population density is around 2630 pax/km^2, nearly double that of its greater metropolitan area which is 1500 pax/km^2. The city of Johannesburg is denser, just under 2900 pax/km^2, while Cape Town, incorporating within it the Table Mountain National Park, has under 1100 pax/km^2. Currently in the top five densest cities in the world are Manila, Philippines (1st) at over 43 000 pax/km^2, and Mumbai, India (4th) at around 28 500 pax/km^2. So, it is important to realise that although high-density living (our focus) occurs here in limited pockets, South African cities are sparsely populated relative to other big cities (Todes 2003: 110).

Ebenezer Howard, a stenographer working in late-1800s London, was dismayed by growing inequality and the squalid living conditions captured in Booth's maps. Heavily influenced by Henry George, Howard's social conscience led to a preoccupation with urban transformation and city form. His concept diagram for his Garden City depicts three magnets representing 'Town', 'Country', and a third in-between place called 'Town/Country'. This last was without the shortcomings of the industrial city, but was near and well-connected enough for residents to enjoy the economic and recreation opportunities it offered. It also had the benefits of fresh air, open space, and nature.

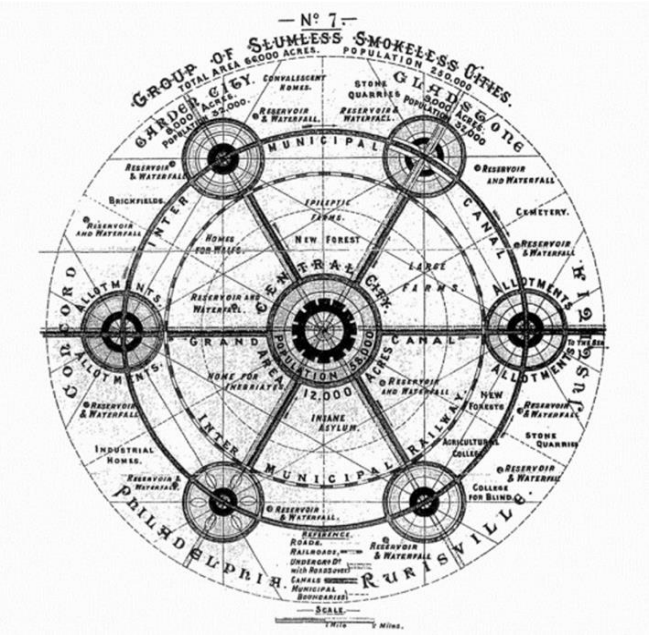


Fig. 70: Howard's diagram of six Garden Cities clustered radially around the central city, total population 250 000.

The planned, self-contained communities of around 30 000 people each—workers, tradesmen, artisans—on the outskirts of the central city, ringed by green belts of agriculture and nature, were the forerunners of the suburbs we know today. Howard's book *Garden Cities of Tomorrow* (1902) cemented his position in 21st century city planning, and led to the building of Letchworth, the first Garden City, in 1903 (Hanley 2012: 57). Howard's "radical plan to dismantle capitalism through the creation of self-governing, self-sustaining cities in the country" and inspire a fairer and more just society, a "vast network of co-operative communities in which every citizen had an equal stake" (ibid), spawned a new urban form, but not as intended. Ultimately, the suburb and its associated lifestyle aspirations would be the very thing to cement capitalist consumerism in the global imagination.

Howard's ideas spread rapidly, and were adopted by a group of 1920s American planners, the Decentrists. Their name captures well the 'centrifugal' force their ideas would enact upon cities—a spreading and scattering now recognised as 'sprawl'. These 'anti-city planning' beliefs, born when the US population had stabilised and the urban question was more about reshuffling existing quantities, became entrenched in orthodox planning (Jacobs 1961: 20).

From the Decentrists came the idea of fewer, wider streets designed for cars (not people), superblocks and commercial zoning, focusing the home inwards (not towards the street) and the need for the "illusion of isolation and suburban privacy" (ibid). This anti-density narrative preferred low-rise cottage living, and became intertwined with 'anti-city' narratives that portrayed big cities as chaotic, unhealthy places. Most problematic for Jacobs was the Decentrists' insistence that new communities must "resist future change, and that every significant detail must be controlled by the Planners from the start and then stuck to" (ibid). This autocratic attitude was, for her, their worst sin.

Residential Density

Of the three measures, residential density is most visible in the form of the city. Population density indicates how many people live in a given land area, but not how much space their living takes up. Residential density counts the dwelling unit, implying a 3D volume. It does not tell us whether a unit's volume is 18m^3 (a shack) or 900m^3 (a 3-storey house), whether dwellings are spread out in a thin layer carpeting the ground or stacked atop each other, but it does allude to what is termed as 'bulk': the amount of built versus unbuilt space.

Walking through a city, we feel density; we sense other humans by signs of inhabitation—lights on, cooking smells, music—which affects our sense of safety. Choosing a route, we scan the surrounds, deciding to cross a road to avoid a vacant plot or a dark side alley. We ask, *If I scream will somebody hear me?* And, *Will they be able to help me?*

While high densities might be a prerequisite for other positive qualities, they do not in themselves make cities safe. Rather, urban safety is contingent on how built forms and street thresholds are designed and programmed. Bulk has to be arranged in

compliance with interrelated planning regulations, the most relevant to density being Floor Area Ratio (FAR), coverage, and envelope controls that include height restrictions and boundary setbacks or 'building lines'.

Residential density has two measures:

GROSS residential density refers to the number of dwellings per hectare, including integral parts of the urban realm such as public roads, open spaces, and land zoned for non-residential purposes. In South Africa, gross density is typically 40-50% lower than net density due to high layout standards (EM CDS 2013).

NET residential density considers only the area of land parcels zoned for residential use. For a multi-building project or complex, this includes internal roads and open spaces but for a single building, only the plot. This measure is most useful for comparing different housing typologies and buildings, and will be used from here on unless otherwise stipulated.

For Jacobs, the threshold between suburban and urban densities is roughly 125 du/ha, above which the "realities of city life can seldom be evaded" and although people may live near one another, they remain strangers (1961: 210). She believes densities below this to be incompatible with urbanity due to "the economics of generating city diversity" (ibid: 211). At the time, NYC's average net residential density was 135 du/ha, and using planning brackets, Jacobs underwent an exercise to compare densities in different areas. In Manhattan, fashionable parts of Greenwich Village and Midtown East Side had densities of (converted from acres) 308-430 du/ha, rising to 431-629 du/ha in much of the rest, and reaching over 630 du/ha in one stable, old Italian community (ibid: 203). Upmarket Brooklyn Heights was 308-430 du/ha at its heart and 184-307 du/ha in the rest. Struggling parts of Brooklyn had densities of 110-183 du/ha, dropping to 37-60 du/ha for areas already in decay.

This pattern consistently contradicts the belief that higher densities are undesirable. We are, however, reminded that density figures mean little when viewed separate from the places and people they represent. Jacobs insists that "proper city dwelling densities are a matter of performance", and "what is right differs in specific instances" (1961: 221).

While it is difficult to quantify how many people currently live in Durban's inner city, the LAP estimates around 70 000. Six out of seven are formal residents, with the rest in low budget accommodation, hostels, shelters, or sleeping rough (Census 2011).

Accurately establishing the number of dwelling units is impossible with such a wide variety of living conditions, but from photogrammetry analysis and making "assumptions around parking, common spaces, structure, occupancy etc., this could be anywhere between 23 000 and 30 000" (EM LAP 2016).

The CDS proposes densities of 80-200 du/ha in primary nodes. Here, 100 du/ha is the proposed average residential density target, to be achieved through mechanisms that optimise development potential—spare bulk, infill greenfield construction and converting under-utilised commercial buildings (ibid).

LAP Masterplans show most new-build inner-city housing either on greenfield sites used for sports (Greyville Golf Course, Peoples' Park, Hoy Park) or well-used brownfield sites (a big portion of the working harbour, Suncoast's surface parking). This would necessitate displacing existing functions, and implies large-scale project planning with whole neighbourhoods built at once, or in phases, by the same developers and Architects. Coverage is low (30-50%) and new access roads would need to be built.



Fig. 71: The Beach Precinct Vision from eThekwini Inner City LAP. White perimeter blocks indicate new MU development.

Despite sound intent and theory behind the LAP and its drive for residential densification, it has two potential stumbling blocks. First, the proposed density of 100du/ha could well be significantly too low. Second, history shows that mass-building large housing projects featuring identical or repetitive buildings, especially when site coverage is low, is a bad idea.

Jacobs discusses the difference between planned projects and old neighbourhoods that have grown organically over time, the latter through processes that are typically small in scale and driven by individual entrepreneurs (Gordon and Ikeda 2011). Such places contain a mixture of old and new buildings of different styles, and they change all the time, but there is little accurate data to be found on 'non-project' densities: "No city that I know of has studied just what localised, building-by-building variations [ ] go into the makeup of density averages in successful and popular neighbourhoods" (Jacobs 1961: 204). I have taken up this challenge in the hope that rigorous examination of existing conditions on the Beachfront might suggest a range of densities more suited to this context. But how does density relate to the standardisation of architectural response?



Fig. 72: Stuyvesant Town's standardised brick towers pictured in 2008, shortly after MetLife sold the development.

A good illustration of the link between density and design is Stuyvesant Town housing project in NYC (1947), one of Mackintosh's sites. Although its density is low for Manhattan (308 du/ha), this is not in itself problematic. Unlike other sites that permit 100% coverage, this project's limit was 25%, leaving 75% of the ground open, so by default, buildings were "most rigidly standardised in rank upon rank of virtually identical, massive elevator apartment houses" (Jacobs 1961: 215). Although Planners and Architects could perhaps have been a bit more imaginative, says Jacobs, "[m]athematical impossibility would defy genius itself to introduce genuine substantial variety at these low ground coverages with these densities" (ibid). This captures the negative impact misguided or mismatched town planning regulations can have on development.

Inconsistencies have since been found in how Jacobs' ideas on density are interpreted. Excited by New Urbanism—which promotes sustainable, mixed-use, walkable neighbourhoods—Planners and developers forge ahead with mass developments but "skip the organic, evolutionary process and instead construct what they regard as the ideal outcome of that process", seeming to have missed the spontaneous order message (Gordon and Ikeda 2011: 439). Moroni (2016) echoes Jacobs' insistence that "no concentration of residence is sufficient to create diversity in 'regimented projects', because [here], diversity has been paralyzed in any case". In his view, instead of trying to directly construct density, we should "allow it to happen through the application of a more abstract and general set of planning rules" that allow for self-organisation and experimentation (ibid). Indeed, almost every built environment scholar considering the density/diversity dilemma identifies the need for planning legislation's careful revision. Maak (2015: 29-30), discussing the reconciliation of market forces with the 'social city', proposes to raise the permissible eaves height in Berlin from 22m to 26m, which would allow property owners to construct luxury penthouses on the proviso that they rent a floor out at affordable rates. Applying this to retrofit and new build projects would lead, with little State effort, to the construction of many more affordable housing units in the city and "quasi-automatically result in the desired social mix."

Indoor Density

Indoor density is a function of how dwellings are occupied by humans, rather than a measure of space itself. It cannot be pre-planned, is difficult to regulate, and can only be accurately established if one has access to intimate details about the home.

A 2-bed flat of 90m^2 housing a couple and a child would have an indoor density of 30m^2/person, while a 4m x 3m shack housing a family of five would have a high indoor density of 2.4m^2/person. Beyond a certain threshold—depending on where and who you are—occupants are likely to feel crowded. Crowding, described as "the psychological sense of overload from too many proximate others" (Gifford 2007), has frequently proven to lead to mental and social strain and reduced QoL. Despite its significant effects, crowding is not easy to measure (Busiol 2016), as unlike other density figures which equate to objective data, "crowding expresses a more subjective feeling of spatial constraint, which makes it difficult to describe and assess" (ibid). Experienced differently, crowding is closely linked to the notion of privacy. It follows that those from cultures that promote individualism and

independence (e.g. Anglo-Saxon) will have higher space/privacy standards, whereas those from cultures that place more emphasis on the collective (e.g. Mediterranean and many Asian and African cultures) will probably have a higher threshold for crowding.

Jacobs reminds us to distinguish between density and crowding, implying that a failure to do so maintains the anti-density narrative. She refers to overcrowding as "too many people in a dwelling for the number of rooms it contains". According to the US census definition at the time, this was anything above one-and-a-half persons per room (Jacobs 1961: 205). The definition has no spatial correlation and therefore implies no fixed threshold, which is inherently problematic.

In South Africa, overcrowding refers to exceeding the maximum permissible number of occupants in relation to the number of bedrooms in a dwelling. Here it is much clearer: bedroom numbers are stated in property descriptions, maximum occupancy is explicitly stated upfront, and all under-18s count as full people. Limits are not, however affected by floor area or unit design, and are often applied selectively in the local context, with clear implications for spatial justice. Where rules haven't changed since a block was built, they often enforce indoor densities that are too low to be compatible with modern life, and which can be leveraged to exclude potential residents based on management bias. Conversely, when a building has a single owner, particularly a company, occupancy limits for rental flats are sometimes raised two or threefold to return as much profit as possible, but at the expense of a building's infrastructure and the QoL of its inhabitants. As such, one aspect of high-rise housing to be investigated is the balance between the physical containers on offer and the control exerted over their occupation.

Gifford (2007) looks at the experience of crowding on higher floors compared to lower ones, finding again that studies were old and contradicted one another. Examples include a 1978 study by McCarthy & Saegert of working and lower middle-class Bronx families, where "high-rise residents felt more crowded, and reported a lower sense of control and less social support than low-rise residents" (ibid). In two similar studies, the former reported that crowding did not vary with floor level, and the latter that residents on higher floors felt *less* crowded than those lower down (Schiffenbauer *et al.*1977 and Schiffenbauer 1979, cited in Gifford 2007)

A 1984 Israeli study by Churchman & Ginsberg found that crowding, which did not correlate either with indoor density or linearly with building height, was significantly higher in the 12-storey blocks than the 8-storey or 20-storey ones surveyed, alluding to a missing variable or curvilinear relationship between factors (ibid).

This is another reminder of the difficulty in researching something so subjective. People are sensitive to environmental stimuli, and a sensation of crowding can be brought on by a poorly-ventilated or -lit room, or a reaction to something as benign as a paint colour or building material that has bad associations.

Discernible in Victorian London is a direct correlation between high indoor density and poverty, and Jacobs identifies a similar pattern in the US, where over-crowding is nearly "always a symptom of poverty or [ ] being discriminated against" (1961: 208). She reminds us that everybody dislikes overcrowding, "but people often do live in high-density neighbourhoods by choice" (ibid).

Today, the link between deprivation and high indoor density remains strong. In any big city, one is sure to find absent landlords charging high rates for run-down city flats, 'no questions asked'. As long as rent is paid, no care is given to how many people are crammed into the unit or what goes on inside. Some units are subdivided with makeshift partitions creating windowless spaces with mattresses on the floor, where one can find society's most vulnerable: migrants, sex workers, and refugee families. This, however, is a worst-case scenario. The reality is that millions of people, poor as they may be, live contented lives in indoor densities that some would consider inhuman.

In Hong Kong, high-density living is only marginally associated with poverty, making it ideal for Diego Busiol's (2016) review of studies into its effects. The three major predictors of high-density living, he found, were a shortage of land, cultural norms that promote living together rather than independently, and low SES or relative poverty. The first factor causes high population and residential densities affecting everyone in the city, which in 2019 had the world's least affordable housing for the tenth year running (Lu 2020). The second and third relate to high indoor density. In China, living with parents after marriage is common, even with a baby and it is not unusual to find three generations co-habiting (Busiol 2016). In 1971, a Hong Kong study found that high-rise housing was only linked to mental distress when flats were shared by multiple family units (Evans *et al.* 2003).

Later, the overcrowding problem was captured in a 2003 study that interviewed 63 children living in inadequate housing in old urban areas, 90% of whom lived with family in a total area less than 9.3m^2, and over a third in under 5.6m^2 (Busiol 2016). A few years prior, the city's Housing Authority estimated 20 000 overcrowded households in Hong Kong (ibid), yet this was not due to high-rise living. Redevelopment, while it certainly produced taller buildings, "provided not only more space per person inside the new dwelling, but also more space per person in terms of outside or neighbourhood density" (Yeung 1977 cited in Gifford 2007).



Fig. 73: Hong Kong's 'Monster Building', a social housing complex comprising five 20-storey high-rises with 2000+ units.

This raises another important moderator of indoor density: the availability of public or semi-public outdoor spaces where residents can escape. The Mackintosh study found that those without such break-out spaces, particularly children, spent more time at home. Obasanjo's 1998 US study of inner-city minority youth suggested that young adolescents might be more sensitive to sub-optimal housing, which he attributed to "greater opportunities available to older adolescents to escape from their immediate residence" (Evans *et al*. 2003).

Busiol (2016) calls for more research into the spatial moderators of crowding, but also cultural subtleties like the suppression of aggression in Chinese culture, which could help others develop tolerance. In Manhattan, families living at higher densities were less satisfied and "complained more about restricted space, crowding, and the limited privacy for adults and children" than those in lower densities (Mackintosh 1982: 250). Interestingly, no difference in privacy levels was reported between higher and lower indoor densities. Asked about coping strategies for privacy, occupants deemed it most important to have "a space of one's own", which didn't need to be a separate room but could for example be screened off in a corner (ibid: 288-91). This concurs with a contemporaneous study suggesting that retreating to "a clearly defined private space" can make flat-dwellers more social and less withdrawn, but when this possibility is absent, they are "more likely to display aggressive boundary-control behaviour in public" (Zimring 1981 cited in Busiol 2016). Other pro-privacy solutions reported by families in the Mackintosh study were larger bedrooms that could be subdivided, and dining areas that could be converted, confirming the use value of slightly oversized (or 'baggy') floorplans. In complexes where social ties were strong, shared childcare and outside space gave parents more time to themselves. Families further adapted to tight, high-rise living by laying down space usage rules and using spaces at different times (Mackintosh 1982: 289).

DIVERSITY

> "The diversity, of whatever kind, that is generated by cities rests on the fact that in cities so many people are so close together, and among them contain so many different tastes, skills, needs, supplies, and bees in their bonnets."
> (Jacobs 1961: 147)

The adjective 'diverse' describes something as having a great deal of variety. A 'diverse development', for example, would include different housing options and non-residential functions, and bring visual variety to existing streetscapes. When referring to people, diversity typically encompasses acceptance, respect and the acknowledgement that each individual is unique. Diversity of the hard infrastructure (built spaces) of a Verticolapa, and the soft (human) infrastructure that inhabits it, are both deemed important to the present research.

Mix of Uses

Diversity that leads to city vitality and successful, thriving neighbourhoods is, according to Jacobs, the highest form of order (Obeng-Odoom 2015). After density, she says, the mix of primary functions that provide for local residents and attract users from other areas, creating a "visibly lively public street life", is a second condition for city diversity to flourish (Jacobs 1961: 221). Rather than seeing a mix of uses as disorderly, chaotic or ugly as the Modernists did (ibid: 222), a closer look at successful city districts reveals the richness in a small area. Along just one street one might find a bakery, bookstore, bar or laundromat occupying the lower floors, with adjacent buildings containing mainly flats. Such organic diversity brings about convenience and creates opportunities for chance encounters with others (ibid: 151).

The antithesis of depressing sameness likely to result from trying to pre-plan diversity, a great variety of uses embodying real differences "can get results which, at worst, are merely interesting, and at best can be delightful" (ibid: 229). Importantly, a mix of uses bolsters safety, because it means people are coming and going at all hours. Jacobs speaks of the importance of "eyes on the street", but also a mix of different populations. She tells of a young girl in her neighbourhood, thought to be under threat by a strange man in the street, who is protected by a web of watchful eyes. Shopkeepers step out, and heads appear in the windows of all but the newly-built high-rent apartments, whose occupants, "most of whom

are so transient we cannot even keep track of their faces, have not the remotest idea of who takes care of their street, or how" (Jacobs 1961: 39). A place can shelter quite a few such "birds of passage" she says, but "if and when the neighborhood finally *becomes* them, they will gradually find the streets less secure, [ ] be vaguely mystified about it, and if things get bad enough they will drift away to another neighborhood which is mysteriously safer" (ibid).

This speaks to the need for heterogeneity to provide round-the-clock passive surveillance, and a mix of housing types and tenures, spread evenly throughout the urban fabric, enables this. So too, does a mix of businesses: the presence of daytime workers and strangers moving through an area supports commerce, which residents alone could not. Jacobs says of this dynamic in the East Village, "We support these things together by unconsciously cooperating economically" (ibid: 153).

Secondary diversity refers to the enterprises that arise to serve those who come to an area for its primary uses. Their intermingling can induce a multiplier effect, bringing new and unexpected uses. Flourishing secondary diversity with "enough that is unusual or unique" can grow into a primary use: a destination which itself draws people (ibid: 163). A vibrant city district with the right mix of primary and secondary uses can attract a third user type: the visitor. Shoppers, tourists, ladies who lunch… their presence indicates that a place is thriving.

The other two generators of city diversity, says Jacobs, are the presence of frequent city streets (and the smaller blocks they create) and the presence of buildings from different times in history, in a variety of architectural styles (ibid: 176). Neither condition is easy to create if not already present, as they depend on a city's existing urban grain. This presents a challenge in South African cities, where a fine urban grain is usually only found in small pockets within remaining historical areas. Durban's best example is the inner-city Grey Street/Yusuf Dadoo precinct, with its jumble of religious, institutional, commercial and residential buildings of all architectural styles, ranging from two to 18 storeys. Here, formal and informal uses overlap and interpenetrate, filling all available 3D space and spilling into the streets to form a lively, efficient, spatially permeable or 'porous' realm.

In new developments, appropriate scale (of primary and secondary uses, relative to context) must be considered. A grocer occupying part of an old building's street frontage is in scale with its customers and the small vehicles delivering goods, but in a dense urban area, a large wholesaler occupying the entire ground floor would be out of scale, attracting private cars and big trucks, and generating waste and congestion. The same applies to a small boutique versus a big budget fashion store, or a corner pub versus a multi-level strip club.



Fig. 74: Verticality, density and diversity come together to create what is perhaps Durban's most all-inclusive, spatially just urban neighbourhood, the old Grey Street precinct.

Threshold design, where a building meets the pavement, is crucial to maintaining not only human scale but also safety and vibrancy. Blank or gaping street frontages like those characterising internalised architecture—what Danish urbanist Jan Gehl calls 'big box' functions—create dead spots on the sidewalk, breaking streetscape continuity and attracting undesirable uses like drug dealing, soliciting, or rough sleeping, increasing the likelihood of crime.

The aim is to arrive at the greatest possible variety of uses, resulting in an even spread of people throughout the day without structures and crowds outsizing the surrounds. We are reminded that a city scene is lively "largely by virtue of its enormous collection of small elements" (ibid: 148).

So how are Planners and Architects expected to master this place-specific balancing act? Once again, Jacobs (1961) answers: They aren't. A neighbourhood is complex and mutative, and like density, it is impossible to arrive at an ideal mix of uses by advance direction. But it *is* possible to set land use parameters and give guidance on what is acceptable or preferred in a given context. It is also important to only exclude uses that are genuinely, not subjectively, incompatible with housing. Residents often resist light industry, places of worship, and entertainment venues for noise, moral or other reasons, yet, as pre-Modern history evidences, it is possible for these uses to co-exist when there is dialogue, and where the will exists. Zoning and land use policies are often too broad or too specific, not to mention too rigid to allow for iterative problem-solving through testing of possible compromises. Public policy, says Jacobs, is powerless in creating and establishing working city uses, and can only "permit and indirectly encourage them" (ibid: 175). Only when diversity of

use evolves naturally with changing needs and desires can it nurture its other important aspects, including "cultural opportunities [and] scenes, and a great variety in its population and other users" (ibid: 148).

It is no surprise that the same conditions which generate plentiful, exuberant commerce also cultivate human diversity. A "varied urban texture" that enables us to live and work in constant contact with others allows us to "learn from their failures and successes through the countless experiences [it] offers" (Moroni 2016). A good mix of uses brings about a good mix of people.

Mix of People

The same way the prudent mixing of uses can lead to outcomes bigger than the sum of their parts, the "social differentiation" found in cities and the "positive inexhaustibility of human relations" that characterise it (Young 1986) can present the ideal environment in which to pilot new ways of living with those we consider different from us. Humans can differ in age, gender, race, religion and political conviction, but Lefebvre's Right to Difference does not refer to a person's right to be female, or Chinese, or worship Buddha. Instead, emphasis was on "the *be* of the 'right to *be* different', not particularly on the *different* narrowly interpreted as particularity" (Dikeç 2001). Here, he refers to a right to *act* differently, in a way that is contrary to the status quo.

Bill Hillier (2008), studying the spatiality paradigm's evolution, looks to French Sociologist Émile Durkheim's proposal that human beings become interrelated in one of two ways. The first, termed 'mechanical solidarity', found in pre-urban societies, is born of "similarities [ ] such as shared beliefs and identities", while the second, the 'organic solidarity' that characterises cities today, is shaped "by differences, such as different occupations, which bring about functional interdependence". It is exactly this quality that makes cities interesting, especially for those who ascribe to alternate identities, behaviours or lifestyles.

Instrumental in the shift over time from mechanical to organic solidarity, says Durkheim, is "the density of social interconnections, one factor in which was population density" (Hillier 2008). Simply put, the mass of people gathered in urban agglomerations gives city-dwellers greater freedom to adopt their chosen persona. It is no coincidence, says van Leeuwen (2010), that the city welcomes Others, be they "migrants, single people, homosexuals, feminists [or] artists", and is a place where "peripheral groups can settle [and] where cultural dissidents and newcomers can feel accepted". Diversity and creativity, he suggests, flourish in a metropolis exactly *because* "rigid cultural norms, accompanied by mechanisms of social control" are minimised, and as we enjoy encountering "the novel, strange, and surprising", we seek out urban living because it entails a "positive experience of difference in terms of excitement, adventure, or eroticism" (ibid).

In Iris Marion Young's (1986) work on the 'politics of difference' and the ways in which people cluster together, she proposes we are all inherently social creatures who seek mutual understanding and build relationships based on 'complementary reciprocity', which implies that "each is entitled to expect and assume from the other forms of behavior through which the other feels recognized and confirmed as a concrete individual being with specific needs, talents and capacities". Here our differences come to complement one another.

Young sees the city as defined by all these omnipresent differences, a "place in which citizens receive positive incentives for recognizing and accepting social difference" (van Leeuwen 2010). Humans naturally cluster, and accepting that the city is composed of social groups each possessing their own basis of identification, makes the differences between social groups more likely to flourish (ibid).

In modern societies, we often find voluntary clustering in "affinity groups defined by ethnicity, religion, language, or lifestyle" observes Young (1999), and it is common for people to settle near friends, family, or "those with whom they believe they will be most comfortable" (ibid). 'Community' refers to such a cluster, geographical or otherwise, for example the 'Floradoone (building) community', 'Kloof (neighbourhood) community' or 'Jewish (religious) community'. Positive connotations of neighbourliness and togetherness are often associated with the fostering of minority cultures, especially when group members "experience discrimination, deprecating stereotypes, exclusion and comparative disadvantage". Clustering can be "an important source of self-organization, self-esteem, and resistance" (ibid). While urbanists such as Sennett (2018) caution against the 'privatisation' of residential clusters, others have more readily accepted their existence and believe "urban villages, counter-publics, and ethnic clustering do not pose a threat to the wider urban public sphere if these publics remain connected to, and in communication with, the city of which they are a part" (van Leeuwen 2010).

Moroni (2016) acknowledges the complexity in content and configuration of residential clusters, saying, "the best ones for each context are most likely to emerge in a situation of (appropriately constrained) spontaneity".

We benefit from accrued social capital in various ways, but all studies confirm the positive impact of human relationships on wellbeing, with over 40 papers confirming the link between health and social capital (Wilkinson and Pickett 2009: 78). Two US studies illustrate this well. The first found that death rates in the late '80s were inversely proportionate to the rate of belonging to a voluntary organisation such as a church or union. The second, in comparing statistics

from different states, found a clear correlation between social capital and health indices. This led *The Spirit Level* authors to conclude that it is "not just our individual social status that matters for health, the social connections between us matter too" (ibid: 79).

Most scholarship on community refers to North America and Europe: 'Western' societies comprising a dominant Caucasian population and several ethnic minorities. This is not the case in South Africa, and while rampant inequalities still exist as a result of past racial segregation, it is increasingly difficult to gauge a person's SES based on skin colour. Add to this the sheer number of different ethnicities and subcultures found in our cities, and all their combinations, and we could be said to exist in a state of 'hyper-multiculturality'. This heady mix gives rise to all manner of new, hybrid, and contrasting behaviours. Notes Jacobs (1961: 238), "city areas with flourishing diversity sprout strange and unpredictable uses and peculiar scenes", and Durban's beaches are a prime example. Where else would you see a lady in a burkini frolicking in the waves alongside a lady in just her bra, panties and a shower cap? There is a level of tolerance here, an acceptance of pronounced difference that is truly rare.



Fig. 75: "The tide rolls in on them all and, curiously, in a space that was historically so contested, there seems enough room for people wanting to catch a wave, slaughter a chicken in a sacrifice, or burn candles and decorate the sand with marigolds" (Ardé 2020). Illustration: Anastasya Eliseeva.

Returning to Lefebvre, we can say with confidence that the Right to Difference has largely been claimed in South Africa. Yet despite this right being written into law, there is still a sense that we are making up the rules as to how we're expected to act towards one another. This field of our creation, it seems, invites the construction of a new definition(s) of community, one tailored to hyper-diversity.

The more traditional ideal of community, Tonnies' *Gemeinschaft* that seeks "selves that are transparent to one another, relationships of mutual identification, social closeness and comfort" is regarded by Young (2007) as understandable, but politically problematic. First, it "exhibits a totalizing impulse" which denies difference. Those motivated by this tend "implicitly to exclude from their political groups persons with whom they do not identify" (Young 1986).

On race relations in contemporary Britain, Clarke (2015) discusses how notions of identity and community imply both physical and psychological boundaries, so we "have ideas of belonging and not belonging, a sense of who we are in relation to others [ ] and of shared values and ideas". But there is no agreement on where such boundaries lie, especially in "complex and often contradictory" social landscapes where community can be expressed equally as something intangible or "something concrete like a building" (ibid). Instead of a move away from traditional community, Clarke found a nostalgic longing for old forms of social relations. He observed strong emphases on "the family, class and geographical locations" and found community identity to be linked to "ideas about outsiders and defining your 'self' by who you are *not*" (ibid).

Young's (1986) second objection to the ideal of community is that privileging face-to-face contact does not account for social ties that are "mediated by space and time distancing", and she rejects the notion of locality-based communities in favour of people forming "affinity groups of their choice across city space, based on families, social networks [and] voluntary organisations". Young articulates her own ideal of community, called 'together-in-difference', whereby "openness to unassimilated others" leads to "equality among groups who recognize and affirm one another in their specificity". This is important for addressing the urban segregation/integration issue through a social lens, providing an "alternative ethical basis for urban life" against the notions of competing traditions of liberalism and communitarianism (Smith 2003: 27). This more balanced view of community holds relevance today, as it accommodates geographical displacement and ways of connecting via new media and technology without prohibiting or restricting us from forming social bonds with our dissimilar neighbours.

Simone (2004) describes the multi-layered interactions between diverse ethnic groups in Joubert Park, central Johannesburg, where "insecurity of residence and the dangers of movement generate a home-grown industry in various forms of protection and payoffs" and where a level of stability in public spaces "is fostered by the sense that anything could happen to anyone, that no one has an advantage".

Here, shared, pervasive insecurity acts as an equaliser, ensuring that no one particular group dominates. Community-building efforts like festivals or markets organised to promote enterprise and public safety tend to be viewed as "a peripheral disciplinary exercise" that distracts residents from developing essential city survival skills (ibid). So while van Leeuwen (2010), in laying down criteria for his own model of 'side-by-side citizenship' states that "being safe from violent crime and aggression in the midst of the urban swirl is a crucial condition for the cultivation and sustenance of intercultural ethos", close observation of the African city reveals a more nuanced polycentric web of interconnections, in which traditional definitions of 'social cohesion' and 'community' fall away, and the value of informal social capital is elevated.

The isiZulu phrase *Umuntu ngumuntu ngabantu,* means 'a person is only a person through/because of other people'. This expresses a strong communitarian standpoint ascribed to by much of Africa, described as a "nebulous concept of common humanity, oneness: humanity, you and me both" (Ifejika 2006). Perhaps the spirit of *Ubuntu* (short form) is what binds together omnipresent everyday South African dichotomies—formal/informal, hard/soft, human/non. It helps us make sense of our place in the world and our need to "generate concrete acts and contexts of social collaboration inscribed with multiple identities" in lieu of "modulated transactions among discrete population groups" (Simone 2004). This view shares much with the new institutionalist approach, which captures "complex socio-spatial relationships within the city [and beyond] in network-based metaphors". Rejecting neo-liberalism enables us to "conceive of every individual and economic enterprise as being connected to a diversity of relationships that operate in different dimensions and at different scales" (Harrison 2003: 19).

Living Together

The ways humans organise socially—whether we call those clusters, communities, or networks—are as complex and mutable as their constituent interpersonal relations. Neighbourhood social ties (NSTs) have been studied since the 1970s, with one team analysing interactions between residents of architecturally identical high-rises in a large Chicago public housing development (Kuo *et al.* 1998). Their findings corroborated earlier research showing that NSTs are formed through repeated informal social interaction, and that the setting affects not only the likelihood of them developing, but also their nature and strength.

Social relations, says Giiford (2007), may either be seen as an outcome in themselves, or as a moderator of other factors resulting from building form.

Researchers must therefore try to determine whether they "preceded or followed a given resident's entry into a building". In examining the strength and type of social relations present in high-rise housing, choice is key. An upper middle-class family who've purchased a flat in a well-appointed block to be near friends, and a low-income family assigned a rental unit in a social housing block, each bring a different social landscape. Studies suggest that high-rise dwellers have more residential acquaintances than low-rise and house dwellers, but that these are weaker social ties that seldom translate into friendships—a pattern found in Germany, Italy and various US locations (Gifford 2007). Notably, Italians and Germans felt they would have more friends if they lived in a smaller building, supporting the idea of a more or less ideal size for a residential community. This is something the present research also probes.

Several 1970s studies found that pro-social behaviour declined with building height, so those in high-rises were less likely to ask a favour or offer help to a neighbour (Gifford 2007). These older studies used controlled samples and did not account for moderators, so are taken as inconclusive.

Cultural factors have shown to influence social interactions, as seen in reduced visiting and borrowing behaviour recorded in German high-rise dwellers, but not Italians. In a 2002 Hong Kong study, a third of public housing residents did not socialise with immediate neighbours regardless of building form, preferring to spend time with work or school friends (ibid). A large Toronto study from 1977 found that high-rise dwellers preferred to make friends outside their building, and had negative impressions of neighbours despite being approximate financial equals (ibid).

The voluntary maintenance of social distance is captured by Shu-Chun Huang's 2006 study of outdoor socialising in Taipei high-rise housing. Of over 32 000 residents observed from the courtyards of three projects, only 16% interacted with others. Interpreted as a sign of withdrawal from high-density living, I believe culture plays a role here too, as results would almost certainly be different in say Brazil or India. Interactions took place mostly in the two 'scenic' and 'activity' areas, where roughly 25% of people engaged with neighbours.

In 1976, Holahan studied outdoor socialising in three different housing forms in a low-income area, and found it to be lower in the traditional, plain high-rise housing project than in the other two: a low-rise tenement, and an innovative high-rise with "creative outdoor design" (Gifford 2007). Kuo *et al*. (1998) in Chicago found that despite the physical characteristics of inner-city neighbourhoods—crime, noise, crowding—that are proven to work against the formation of NSTs, their growth is encouraged by common green spaces that feature trees and

vegetation. These studies reinforce how environmental design influences behaviour, and how open space and nature stimulate sociability.



Fig. 76: The courtyard of Da'an housing, Taipei, illustrated the pro-social effects of complex, interesting landscaping.

Proximity has proven a major determinant of social interaction in high-rises, with most contact occurring between residents of the same floor. Although a person dwells in close proximity to others, many remain relative strangers, and one is more restricted to those living on the same floor "for the sort of encounters that might lead to friendship, such as borrowing food or talking while children play" (Gifford 2007).

In a 1984 Israeli study of women living in 8, 12 and 20-storey buildings, 97% knew at least someone—and two thirds knew everyone—on their own floor, but only a third knew more than 30% of the building's residents (ibid). It also found that women living on higher floors knew more of their neighbours, but those living lower down had more friends among them.

A Brazilian study comparing the living conditions and wellbeing of 50 elderly residents of an old-age high-rise condominium with that of 173 others living in the community showed that overall, the condo delivered a higher QoL (Teston and Marcon 2015). Using WHO instruments, they found that although many condo-dwellers lived alone and had little family support, their scores in the *Physical and Environmental* domains, *Sensory Functioning* and *Social Participation*, were significantly higher than those of community dwellers. Benefits, researchers conclude, relate directly to "characteristics of this new housing modality" where spaces and facilities were tailored to user needs and presented "opportunities for companionship, privacy and independence" (ibid). Such benefits, I posit, also arise indirectly from two distinct qualities of a condominium: verticality and density.

As seen, most studies investigated homogenous building populations like students or pensioners which are naturally controlled for age and SES, making them ideal for empirical study but less useful for capturing interactions across lines of difference.

The Mackintosh study inquired into social relations at the three Manhattan sites. Respondents in Stuyvesant Town had lived there for an average of seven years, a quarter of their good friends lived there, and they knew around 70 neighbours by name, nine of which would visit the apartment (1982: 208). Common descriptors for neighbours were "middle class, friendly, family-oriented, professional and community-minded" (ibid: 219). Single building residents, who had on average lived there slightly longer, knew around 22 neighbours, had three block friends who visited, and no good friends living there. They also supplied fewer descriptions of neighbours, and 8 could not describe the inhabitants of their building at all (ibid: 208).

Polar attitudes to city neighbouring were found to map onto the two high-rise housing modalities. Most complex-dwellers appreciated the social networks they had assembled. Said one Stuyvesant Town resident: "There are so many groups, companionship with your peers, people you have a lot in common with. Everyone is friendly. It's like living in a small community but you are within the city" (ibid: 218). Single building residents, however, preferred to maintain social distance. "We tend not to know the immediate neighbors. We're cordial but we have no social relationships. I wouldn't want to be bosom buddies with people who live and share the walls", said one, and another: "I like the sort of relationships you can maintain with people in the city, [ ] a combination of physical proximity with psychological distance" (ibid: 216). Residents of complexes most often cited the "sense of community, good neighbors" as their favourite thing about living there, while single building residents most appreciated the privacy and independence offered by their high-rise, deliberately steering clear of more communal arrangements.

Here it can be seen how neighbouring preferences influenced flat-dwellers' selection of high-rise housing modality and *vice versa*. It is important to note the marked difference between the two physical settings—the host of shared facilities offered in the complexes, and their complete absence in the single buildings surveyed—and to speculate how results might differ in situations where such facilities *were* provided at single building scale. It is possible that preconceived ideas of forming involuntary relationships and community expectations would fall away at a smaller spatial scale, allowing open-minded single building residents to adjust their social boundaries and take advantage of the increased utility and satisfaction reported in complexes. There is little evidence linking attitudes to the diversity of resident populations in each case. The most common

way to describe fellow residents across the entire sample was "diversity, mix of people", mentioned in 56% of cases.

Staying in the US, I now examine some mixed-income residential developments researched in the 1990s, to see how the act of 'neighbouring' might differ in heterogeneous populations with two or more distinct groupings.

Brophy and Smith's *Mixed-Income Housing: Factors for Success* (1997) compared seven dissimilar MI projects in different cities, and their findings across a wide range of contexts, and developmental and operational models, reinforced each other. I have selected two examples, one more successful than the other, to share their insights into mixing ratios, building types and social relations.

HARBOR POINT in Boston, a high-crime waterfront neighbourhood set apart from the city, was the site of a failing public housing project where several towers were demolished to make way for townhouse units. Most of the 400 subsidised units were occupied by minority families, all classified low-income, averaging two to three children, and who received public benefits. Their turnover was very low, around 6% per annum. The 800 market rate units, in contrast, had a 50% turnover and housed a racially and ethnically diverse mix of professionals and students and very few children. The two disparate groups hardly interacted, attributed partly to the fact that they had little in common and partly to the development's physical layout. The three and 4-bed perimeter townhouses, built for families, were almost all occupied by low-income tenants, while market-rate tenants populated the high-rises. A trend was also seen whereby market-rate tenants transferred out of townhouses into taller buildings, further skewing the supposed mix. This physical separation by house form accentuated differences and fuelled conflicts between groups.

EMERY BAY CLUB AND APARTMENTS in California is a developer-driven mid-rise gated garden complex that only included subsidised units to enable the completion of Phase 2. Of 260 units, 60% are market-rate, 20% reserved for moderate-income tenants (50-80% AMI) and the remaining 20% for low-income tenants. Amenities and security are excellent, and Emery Bay's location, although suburban, is desirable for its proximity to workplaces. The resident mix, which works well, consists of nearly 30% professionals, 20% students, and around a third working- or middle-class individuals and couples in blue-collar, clerical or sales jobs. Most residents are employed, under 3% of the units house children, and the population is extremely racially and ethnically diverse. Turnover is unusually high but not, research confirms, due to dissatisfaction. Little neighbouring might be expected to occur in these circumstances, but a monthly brunch hosted by management regularly drew around 100 people—impressive, given that income disparity between the highest and lowest earners was roughly tenfold. This, researchers believe, hinged on the simple fact that the subsidised units look the same as market-rate ones and are interspersed among them, so one cannot tell who belongs to which group or who pays what in rent.



Fig. 77: A Decent Place to Live (Roessner 2017) tells the story of Harbor Point's redevelopment through the voices of public housing beneficiaries who battled to rebuild their community.

No amount of encouragement or organised community-building has proven able to force interaction between dissimilar others in mixed-income housing, but researchers conclude that maintaining a peaceful dwelling environment is likely to be easier if the economic disparity between groups is minimised. If groups do not belong to adjacent income brackets, introducing one or more middle tiers is a good way to de-emphasise differences (Brophy and Smith 1997), and potentially reduce the disparity between tenure lengths of upmarket renters who move often (Jacobs' 'birds of passage') and low-income households who tend to stay in a unit for many years, even generations. It follows that mixed-tenure models (some owners, some renters) would naturally result in even greater occupant diversity.

One of the authors' key conclusions was that MI housing must adhere to the basic principles of good property development and management with respect to location, but also the design and construction quality of units, if it is to attract market-rate residents over other offerings. Development size, it seems, might also make a difference, as in these examples, housing clusters with more than 250 units struggled to achieve social cohesion.

The 20th century saw race and class disparities increase over time, and the production of mixed-income housing has continued globally into the 21st

century, even though "hypotheses about what [it] can achieve continue to change and questions remain about the model's purpose and actual effect" (Fraser *et al.* 2013). It is not that mixed-income housing as a concept is flawed. On the contrary, in places with long histories of residential diversity and mixing, it is the norm. Approaching it less didactically, we may seek to test solutions at smaller scales to learn what works better in different contexts. This supports Jacobs' (1961: 229) belief that little good can come from trying to synthetically produce diversity, and we instead need to open doors and remove barriers that prevent its independent growth. Inserting affordable mid-range housing options throughout—and indistinct from—other inner-city built fabric, old and new, would increase the diversity of occupants in a geographical area, and along with it, the chances of any given resident meeting somebody with similar traits or interests. We must also, say researchers, dig deeper to identify the socio-spatial mechanisms by which positive effects are transmitted in such situations, as it is unclear exactly which characteristics of "socio-economically heterogeneous communities [ ] permit better outcomes. What matters, and what matters most?" they ask (Rosenbaum *et al.* 1998).

Findings around ethnic diversity in MI housing remain mixed, but one study of place and displacement in US public housing found that "most residents of an ethnically and racially diverse community viewed diversity as an asset" (Manzo *et al.* 2008, cited in Keller *et al.* 2013). Following the recent recognition that "influence can run in more than one direction", MI housing research has focused more on reciprocity, examining the possible effects on higher income residents from residing with low-income others (Fraser *et al.* 2013). Positives are likely to include increased empathy for/understanding of dissimilar others, and the revealing of hidden privilege—both things that appear to be much needed in South Africa.

Recently, questions of transformation and influence have begun to shift focus from social/social (person-to-person effects) to social/spatial (people's effects on the surrounding environment), for example: "Do higher income residents' (assumed) expectations and demands on property management and city services bring benefits to all residents?" (Fraser *et al*. 2013). This should be borne in mind when researching the potential of mixed-income housing in local contexts.

Returning to South Africa, Alan Morris' *Bleakness & Light* (1999) is a rigorous investigation into racial transition in Hillbrow, an inner-city high-rise neighbourhood in Johannesburg, in the years directly preceding and following desegregation. In this fascinating work, a broad, integrated research design combines a large survey dataset with in-depth interviews of everyone from property managers and landlords to tenants and caretakers.

Using the Apartheid government's race categories, the breakdown of 1007 residents in 396 households surveyed in 1992/3 was 62% African, 16.9% Coloured, 15.8% White and 5.4% Indian (Morris 1999: 347). A designated White Group Area, Hillbrow nevertheless saw non-Whites moving in from as early as the '70s. First Coloured and Indian, and later African people, relocated to the area to be closer to work, and in response to housing deficits or to escape violence in their own Group Areas. Though the Act was abolished in 1990, the area was already very mixed at time of study.



Fig. 78: Looking down Pretoria Street in Hillbrow, circa 1985.

As the neighbourhood transitioned, many Whites 'took flight' to the suburbs. With the abolition of rent control in 1980 and the rise of Sectional Title ownership, others were forced out by affordability. Greedy landlords who had bought multiple investment flats in the area soon learnt they could spend very little on their buildings and still demand high rents from non-White tenants who were 'illegal' and so unlikely to argue (ibid: 18). Asked about community, those who had grown up in the area spoke of a strong sense of belonging that was no longer apparent, and one believed there had never really been a sense of community due to the population's transience. Overall, only a third of respondents felt there was a sense of community in Hillbrow at the time (ibid: 227).

Morris observes that although Hillbrow was a mixed neighbourhood, there was still substantial residential segregation, with a high proportion of blocks occupied solely or mainly by one race group. Implicit and explicit racist admission policies of agents, landlords and caretakers allowed residential apartheid to survive, resulting in what Morris calls 'white islands'. This segregation was supported to a large extent by affordability, as incomes still mapped onto race. Racial clustering was observed across the

board, with 20% of the sample living in uni-racial blocks, and nearly 60% in blocks where three quarters of the residents were their own race. Consequently, only around one in five blocks could be considered 'mixed' (Morris 199: 288). Within mixed blocks, roughly half the occupants sometimes or often socialised with people of other races, and 84% of the sample overall felt that racial barriers had broken down to at least some extent (ibid: 357).

As discussed, residential propinquity and similarities between neighbours support the formation of social ties. But Morris noted it was not just racial homogeneity that encouraged "strong social ties in a block of flats, but also other common features like the age of residents or the stage in the life cycle" (ibid: 243). Residents bonded over children, a desire for companionship, or building-related issues like a non-performing landlord or a caretaker's unfair dismissal.

This illustrates the benefit to community-building, how a critical mass of 'settled' residents can counter urban transience, how participation in decision-making and group affairs builds social capital and cohesion, and how working together towards a common goal—in this case, protecting an investment and/or upholding decent living standards—can unite people despite their differences. In some blocks, residents banded together to clean the common areas and take shifts guarding the entrance. Such social organisation can assist in plugging gaps that arise in localised infrastructures.

Time and again, the Morris study illustrates how people, regardless of difference, were treated the way they treated others. White pensioners who approached the transition harbouring no racist sentiments were delighted with their new Black neighbours, finding them friendlier and more helpful than their predecessors (ibid: 279). Younger, sociable individuals who were used to mixed environments were less likely to feel lonely, were more likely to make friends, and overall were better equipped to enjoy the neighbourhood's offerings.

Morris concludes from his findings that in the early 1990s, around "a quarter of Hillbrow residents, at most, had frequent, meaningful interracial contact" (ibid: 302). Given the country's political history, what we know about the social pressures brought on by high-density living and the study's timing at the dawn of democracy, this is astonishingly positive. The author substantiates the importance of his enquiry in helping us predict the destiny of many such neighbourhoods "undergoing substantial racial transition in post-apartheid South Africa". In addition to a solid knowledge base and some important methodological insights, the Morris study gave hope to the present research.

Conclusions

A sound understanding of the three characteristics of a Verticolapa should form a solid foundation for interpreting the findings of this study and any normative outcomes they inform.

A close look at verticality has revealed its use throughout history as an instrument first of praise, then power and status, then social welfare, and in recent times, as a signifier of wealth and exclusivity. The story of the residential high-rise tells how verticality has been leveraged to create homes in the sky, with results ranging from the horrific to the sublime. What can be concluded from all the past research reviewed is that a well-designed high-rise is certainly able to provide a good QoL and high satisfaction levels for residents across the demographic spectrum, from young families to pensioners living alone, regardless of income bracket, ethnicity or any other social markers. This housing form becomes problematic when populations are clustered according to SES, either intentionally or in response to market forces, and form enclaves that are removed or cut off—physically or operationally—from existing city fabric. Whether they constitute islands of relative poverty, as in low-income social housing towers, or exclusive skyscrapers for the ultra-wealthy, such developments employ verticality in a segregative manner, and so work against spatial justice in cities.

If homogeneity is avoided, a well-located block of flats that fulfils the minimum requirements for housing—structurally sound, with shared infrastructure that works and units that are clean, safe and dry—and connects inhabitants with the urban surrounds, it can instead be an agent of spatial justice. Such a building may activate leftover or underutilised city space, providing much-needed housing for middle- and lower-income groups and 'knitting' bits of disparate urban fabric together. Vertical space also has a natural built-in defensibility, as trouble tends to come from the ground, and elevation brings with it peace of mind.

Tall structures also lend themselves to multi-level integration in a way that horizontal agglomerations and structures simply do not. They can stack different dwelling sizes and types atop one another, interspersing them with support facilities and non-residential functions reached on foot within minutes, and can be configured so that built form cannot be mapped onto class, race or other social markers. In the absence of status symbols and stigmas, residential space becomes an equaliser.

It's time to rethink how the 'up' can be used to redress imbalance. Can we imagine cities where the highest spaces with the most sunlight, the best views and the freshest air, are accessible to society's least fortunate? This is a tantalising if rather naïve proposal, given the current costs of building at height—but in pursuit of progress, it is foolish to limit ourselves to the technology and ideas available right now.

Density can be positive or negative depending on scale and context, and a good grasp of it in empirical and experiential terms is needed if we are to analyse and compare existing places in the study area. A strong case has been made thus far for why increased net residential density is key to addressing persistent residential racial segregation in South Africa, and why it should be earnestly pursued in cities—but density targets for new housing in the local context are not well defined, which the empirical findings of this research will address.

Indoor density looks to have the greatest impact on the experience of inhabiting a flat, but is highly subjective and outside professional control. Nevertheless, documenting the intensity of 3D development on sites in the study area and the intensity of occupation of their constituent parts is sure to deepen understanding around local dwelling patterns, indicate some space standards to guide designers, and perhaps suggest how the interplay between floor area and cost (of construction and to occupants) can be manipulated to allow more affordable housing to be built on high-value land.

Lastly, the various meanings and implications of diversity come under scrutiny. A synergistic mix of city uses (residential and non) and variety of buildings (in size, style and age) maintains a working urban collage in a way not seen in monofunctional buildings and mass developments. This is strong justification for all new residential high-rises to have a mixed-use component, and for their overall size to be limited.

Most important here, though, is human diversity. Durkheim's concept of organic solidarity is a powerful one, easily identifiable in local inner-city environments, where it could be said that 'otherness' is the norm. Residential mixity appears to make us stronger as individuals and more robust and resilient collectively, better equipping us to negotiate uncertainty and dysfunction and to enact positive transformation. Socio-economically diverse residential environments are uncommon where inequality is high; the more unequal a place, the less likely we are to find households of differing means under one roof, and the more resistance we find to integrated living. Yet although the existing housing forms on offer are shown to reinforce difference in many ways, evidence so far suggests that when dissimilar people do dwell in close proximity, their differences quickly come to matter little. It follows that if buildings are designed to support social interaction—with green common areas like playgrounds and gardens and indoor spaces for meetings and activities—and are structured so that all residents can partake equally in the making of their physical and social domains, these positive effects could quickly multiply.

In short, verticality is a compelling way to achieve greater density in urban areas, and density in new, mixed developments is one way to enable the diversity that holds the key to more spatially just South African cities.

Chapter 5:

Clipboard, Dictaphone, Smile

Research methodology

> "Booth worked from the bottom up: street by street, house by house he traced the wealth of inhabitants, showing how complicated a map of political economy could be, yielding no simple circle but rather a collage. Booth then asked himself, is this mere mess? If not, how do the elements in this complex picture interact? Booth's collage provokes reasoning about the image; [ ] Booth is reflexive rather than symbolic."
> (Sennett 2018: 68)

The pre-Modern approach adopted by Charles Booth in gathering data for his 'Poverty Maps' of Victorian London contrasts with the top-down, diagrammatic way of understanding and representing the city ('simple circle') adopted by the Chicago School—a Modernist, standardised view of the world that denies difference. The methods employed in this research are decidedly Postmodern. They accept space as a social construct, treating buildings and urban environments as containers for human life rather than standalone objects, and they acknowledge complexity and layered multiplicity. They endeavour to engage with the inequality and multiculturality present in a specific 21st century Global South dwelling paradigm in a new way, mixing research methods and reimagining outputs to meet hybridity with hybridity. As a member of this particular urban community, I attempt to make sense of subjectivity, giving a voice to others through one-on-one interviews.

Here, I sought to establish new ways of navigating the uncertainty that is coming to characterise the Anthropocene epoch. Pounding the pavement, clipboard in hand, I became an integral part of this urban landscape—researcher and subject, merged into one. For a full year, I was 'Lindsay the Researcher' before I was 'the Architect', 'the Teacher' or anything else. And the work, at the same time as enlightening and exhausting, felt valuable. This chapter follows my research journey from first inception to final product.

Approach to the Research

As a Built Environment dissertation, the basis of this work is spatial. Grounded in architecture, it borrows heavily from other disciplines—sociology, urban geography, environmental design—and their tools and lenses, seeking to capture, analyse and learn from a snapshot in time, documenting the totality of the inner-city living experience.

Using a socio-spatial lens, the study focuses on the living conditions in high-rise residences along the Durban Beachfront. It aims to establish a new way of reading the built environment, one that captures the physical aspects (design, condition) of a building, and the experience of inhabiting it. While the study is first and foremost documentary in nature, it combines empirical and ethnographic research methods to ultimately arrive at a normative outcome—a 'model' to guide the development of similar buildings and neighbourhoods into the future.



Fig. 79: The repetitive, anonymous façades of Beachfront high-rises often belie the richness and variety hidden inside.

The study's theoretical and literary underpinnings colonise the liminal space where architecture and sociology meet. In accepting Lefebvre's proposal that space is both product and producer of social processes, this research challenges the notion that the built environment can be accurately studied separate from those who create and inhabit it. Gathering, combining and analysing both qualitative and quantitative data necessitated the use of experimental, original techniques, so the research design was developed, tested and adapted iteratively, and was still being refined well into the fieldwork. The primary data collection method consisted of a year-long series of self-administered questionnaire-based interviews with adult residents living in vastly differing circumstances all over the Durban Beachfront study area.

Tall apartment buildings are experienced at various spatial scales, from public to private. Their size makes them conspicuous, distinguishable from a distance where they shape the city skyline. Moving closer, the exterior can be visually explored, their windowed façades blinking back and lighting up at night like rows of television screens, each set to a different drama. Entering the lobby, one steps into the next level: an interstitial, semi-private space where entrance is granted by signing a page, or speaking into an intercom before being scrutinised and buzzed in. Passing this checkpoint, one is no longer a stranger but not yet a friend; an outsider loosely accountable to the person being visited. Moving through these spaces—riding the lift, climbing stairs, ambling along corridors—reveals the structure, layout and architectural language of the building, and the relationships between its component parts. In this realm, one is aware of being surveilled, yet is still free to choose which path to take. Clues of what can be found at the third scale are all around: sounds and smells drifting down walkways; decorated doorways; ornaments and religious items peeking through windows. Much can be learned about a building's inhabitants while traversing these spaces, taking note of how clean and well-kept they are and the extent to which everyday activities—housework, children playing, elders chatting—spill out onto them. Especially telling is how residents respond to a new face. Do they smile, frown, ignore? Greet, or interrogate? Crossing the threshold into an individual unit, the private realm, the investigator is now subject to restricted movement, walking and sitting only where led, and making sure to observe any expected rituals. The spaces of the home are experienced by the researcher only as presented by their occupier, who instinctively acts as a tour guide in their own living environment. How they do so, speaks volumes about how they feel about their space and the meanings assigned to it. This begins to reveal a fourth, invisible level: the personal. This itself is the primary moderator of the dwelling experience. Elusive and difficult to capture, it also holds the most valuable clues.

Similar to the process described above, built environment research or design typically occurs in a 'top-down' or 'outside-in' fashion, starting from the largest scale and zooming in to add detail at each spatial level. The ethnographer, on the other hand, is concerned primarily with the most intimate level, and seeks to understand a situation from within, using the personal lens to view a host of externalities relevant only because of their impact upon the subject. In the present work, I chose to employ the sociologist's lens, stepping upwards through spatial scales (personal/unit/building/neighbourhood) instead of the other way around.

From the outset, a variety of research questions arose: Who lives in the Beachfront high-rises today, and why? What quality of life do these buildings provide, and how might it be measured? How do people shape their identities in these spaces—and can this be shown to impact their living environments? How can we better understand the invisible socio-economic networks in collective housing? To what extent do ownership and management structures affect who is able to and who chooses to live in a particular building? What resultant atmosphere prevails there? Where do building populations sit on a scale from homogeneity to heterogeneity, and might we establish an 'ideal mix' or 'golden diversity ratio'?

Tied to these questions are many more related to building design: How do certain design features affect liveability and pro-social behaviour? What features and facilities make buildings and flats attractive to occupants of different ages, lifestyles and cultures? What is the effect of a unit's height off the ground? How big is *too* big when it comes to managing a building? How does location—in a building but also a neighbourhood—and access to communal and public space affect QoL? And finally, what might be the ideal size, height and configuration of a block of flats in this context, and how would it best be developed and run?

An inductive approach to the research meant that sub-questions were refined, modified and removed as the study progressed, until a hypothesis—initially absent—emerged. As the dataset grew and patterns were slowly revealed, it was possible to translate this hypothesis into a single overarching design problem:

How might the residential high-rise be leveraged as an instrument of justice to foster socio-economic and spatial integration, address housing inequality and catalyse the renewal of urban neighbourhoods?

Answering this question entails consolidating the information gathered from reviewing theoretical

and scholarly literature and architectural precedents, collating and analysing the data collected in interviews, establishing which spatial and organisational configurations appear to lead to positive or negative outcomes, and translating these into testable design-level theories. As such, after distilling the conclusions in Chapter 12, my recommendations take the form of a comprehensive set of design guidelines for the development of integrated residential high-rise housing in the local context. Guidelines touch on all aspects of the proposed model from inception, through design and construction to occupation and operation. In Appendix A, what I have called 'Architectural Musings', the guidelines are tested by applying them to an actual site located in the study area, to arrive at a schematic architectural design that represents just one of many possible incarnations of the Verticolapa. At a basic level, this is intended to demonstrate the model's practical application.

This work aims to further the search for urban forms that are intrinsically just, resilient, long-lasting and adaptable, accommodating a wide range of individuals in terms of SES and lifestyle while fostering social cohesion and capacity-building across class and creed.

The Study Area

A trained architect, I was born in Addington Hospital, a high-rise complex at one end of the Durban Beachfront, and now live in a high-rise block of flats at the other. As such, it was always a given that this research would have something to do with 1) this specific geographical area, and 2) tall buildings. Studying the dot maps derived from 2011 census statistics, I noticed how the colours representing different race groups intermingled—particularly in North Beach, but notably wherever residential fabric touched the Eastern Seaboard—and this aligned with my own experience of living here. Zooming out, the map revealed an invisible east-west line along Pixley ka Seme St, north of which the dominant population group is red (Indian/Asian) and south of which it is green (Black African). This reflects what was discussed in Chapter 2, namely the declining but still significant correlation between race and income in the country, and the persistence of fragmented, segregated urban patterns, both of which are legacies of apartheid. Yet despite this, the dots continue to mix along the frontline, indicating a high density, high-rise strip of inner-city fabric that accommodates all races. What makes this possible, I asked, and what can be learnt from this situation?

The initial plan was to focus on North Beach, given its defined borders and level of racial mixing. However, it quickly became clear that there would be validity issues if research only covered the situation in a third of the strip and ignored the rest. I then included the entire length of the Durban Beachfront where residential high-rises were present.



Fig. 80: The study area, bounded in orange.

Given the variety of conditions and resident populations, it was decided that less data gathered from a larger geographical area would paint a more holistic picture than more accurate statistical data collected from a smaller area. This necessitated a

more open-minded, flexible approach to the research and a willingness to let it develop along its own path.

The study required clear geographical boundaries arrived at via logical, consistent parameters. The starting point was a digital 3D model of the study area used by architects at SoundSpaceDesign in 2006 to analyse existing spatial conditions on the Durban Beachfront prior to the 2010 World Cup upgrade. Following this, a current 3D CAD model containing buildings, topography and cadastral information was extracted from the eThekwini Municipality GIS, and used as a working base for more detailed site-by-site investigations. This was flattened into a 2D drawing and underlaid with a recent satellite image from which the rest of the information (roads, pavements, paths and landscape features) was traced.

As the shoreline forms a natural eastern boundary to the study area, all frontline buildings are automatically included within it, but settling on a western boundary was more complex. I wanted the study area to include all the residential high-rises that functionally relate more to the beach than they do to whatever lies to their west. In North Beach, Stalwart Simelane Street, with open-air functions and sports fields to its west, forms a natural boundary. Further south, the boundary was placed to bisect Victoria Park along its highest point, west of which the land dips away into the working downtown (Rivertown) precinct. South of this, the urban fabric is contiguous with the CBD proper until Rutherford Street. Further down still, frontline residential use is interrupted by the large Addington Hospital complex, behind which the land dips away towards the harbour.

The decision to include one plot to the west of Gillespie/Prince Streets resulted in a jagged western boundary that runs very close to the shore at some points and at others, where a property occupies the full width of the city block, extends as far as Mahatma Gandhi Rd. At the urban scale, this forms a more suitable boundary than bisecting a road, as the street itself—enclosure ratios, thresholds, the relation between buildings either side and the activities it hosts—bears contextual relevance. The final study area comprises a 3D strip of urban fabric around 3.5km long, 100m high and between 100m and 300m wide measured back from the beach road (Snell Parade in the North, OR Tambo Parade in the South).

The Scoping Study

The scoping study, carried out between April and September 2017, aimed to get a comprehensive picture of the extent and type of long-term residential buildings in the study area by identifying all high-rise blocks of flats, along with their size and ownership structure. From this, a strategy for identifying research participants could be crafted.

Walking from building to building, clipboard in hand, I spoke to security guards, supervisors, caretakers and residents, returning again and again until I was confident that I understood what existed here. Data sheets for each high-rise residential building were populated with building names and addresses, the number of storeys and units, contact details for the on-site liaison, and other relevant data. Scoping revealed a wide variety of ownership and operational structures, each of which was assigned a code. Blocks of flats, the typical long-term residential offering and the focus of this study, were coded under one of four ownership schemes: Shareblock (SB), Sectional Title (ST), a mixture of the two (MO), or single owner (SO). Such buildings were home to 96 out of 101 respondents, and will be discussed in more detail in Chapter 9. Four less common operating models—Student Residences (SR) and Retirement Homes (RH), surveyed by means of Focus Group Discussions, and Social Housing (SH) and Hotel Hybrid (HH)—were home to the remaining five participants, and will be touched upon briefly here.



Fig. 81: The 86-unit Wavecrest rental accommodation (SO)

STUDENT RESIDENCE (SR): In recent years, many ex-hotels and blocks of flats in central Durban have been bought by local developers and converted into student accommodation. Between two and eight students usually share a self-catering unit, and varying levels of communal facilities are available. Security is typically contracted out to private companies, access is controlled via student card or biometrics, and most institutions provide shuttle buses to and from campus. Three such facilities exist inside the study area in South Beach Central. Two are the ex-Hotel Palmerston, let by Mangosuthu University of Technology (MUT), and the large adjacent ex-Hotel Lonsdale, leased by University of KwaZulu Natal (UKZN) at the start of research but later taken over by MUT. The third, and the only one surveyed, is DUT's Baltimore Residence in South Beach, an apartment block that was bought, together with another in Albert Park, by former ML Sultan Technikon before the two institutions merged. The buildings have

proven costly to maintain, and 11-storey Baltimore's lift has not worked for some time. For this reason, and because the buildings are located in busy, run-down inner-city areas where students are vulnerable to crime and distractions, DUT considered selling them, but student backlash at the idea of reducing the university's bed count led them to apply for State funding to fix them up instead (pers. comm 2018)

RETIREMENT HOME (RH): There are four buildings in the study area housing exclusively over-60s, only one of which was surveyed. Ex-hotel Edenroc on the North Beach frontline is a shareblock with a waiting list for units that are bought and occupied on a 'life remaining' basis, with high monthly levies that include meals, care and a range of social activities. The other retirement homes are Eden Crescent, an ex-Holiday Inn in North Beach, and two conjoined buildings at the study area's southern tip, run by NPO TAFTA (The Association for the Aged). John Conradie House, a converted '50s block of flats, and Langeler Towers, a purpose-built State-subsidised facility completed in 2017, offer privately-owned, rental and assisted living options for mid- and low-income pensioners.



Fig. 82: TAFTA's Langeler Towers (left) and Conradie House (right) retirement homes overlook uShaka Marine World.

SOCIAL HOUSING: Under-represented inside the study area but found in droves just outside its South Beach boundary, only one social housing example was surveyed. For the Hawaii complex, First Metro Housing (FMH) bought up three buildings: adjacent flats/timeshares, and an office block (east, central and west), and converted them to State-subsidised, affordable rental housing. The 128-unit complex has an off-site project manager, a live-in supervisor, and is distinguishable by the pastel yellow and pink paint adorning all FMH sites.

HOTEL HYBRID (HH): These buildings accommodate a proportion of full-time residents, and the remaining units are hotel rooms or holiday flats. Like any hotel, they have 24-hour front desk reception, and some offer centralised services like housekeeping, a laundry, gym or pool, available to residents inclusively or at extra cost.

The three examples in the dataset operated very differently. The Oceanic in North Beach, a shareblock, has conference facilities and is run by First hotel group. Just over half of the units are privately owned, with a few lived in by owner-occupiers, but most are rented out to medium-term residents or holidaymakers. The Parkview, a shareblock and ex-hotel south of Victoria Park, operates primarily as a retirement home. Some pensioners own their units while others rent, and designated hotel rooms are spread around the building. Everything is managed centrally, most hotel guests appear to be budget business travellers, and no children are allowed. South of Addington Hospital, sectional title Tenbury has a high proportion of holiday apartments managed by individual owners, in addition to longer-term owner-occupiers and tenants.



Fig. 83: This North Beach shareblock is run as a hybrid hotel

As scoping continued, key information from the data sheets was transferred to the digital plan: Building Name, No. of units and Ownership type, abbreviated according to the codes above. Then, in a manner inspired by Charles Booth's maps of Victorian London, each block was colour-coded according to its perceived 'research-friendliness' on a scale from dark green (very welcoming) to orange (inaccessible or not conducive to study). As research progressed, a red dot was added to represent each interview. This ever-evolving graphic made it possible to monitor at a glance where energy and activities should be focused to ensure an even spread of participants, and of building types and sizes.



Fig. 84: Excerpt from the Scoping Plan, with blocks of flats labelled, coded and coloured according to 'research-friendliness'. Red dots (interviews) were added later.

The scoping study identified nearly 90 residential buildings inside the study area, around 75 of which fulfilled the following requirements:

- Seven or more storeys high, with a lift
- A critical mass of long-term residents living there for a year or more, and
- Accessible for research in principle

The initial plan was to select around 30 suitable buildings in which to carry out wholesale research, identifying participants through percentage sampling in each. Soon after beginning the process of acquiring gatekeeper permissions, it became clear that administrative politics, which differed from block to block but were never absent, would render this impossible. Some managing bodies were suspicious, and a few supervisors who had no experience of such requests were concerned about privacy and security implications for owners and residents. My approach needed to be gentler and more flexible. I would need to work closely with the 'champions' I met during scoping to promote the interviews as something relaxed, informal and non-threatening that residents could partake in voluntarily and confidentially. I would also need to let go of quotas, and accept a less even geographical distribution of interviews, as well as the possibility of securing several respondents from some blocks and none from others.

Identifying Participants

The study sought to recruit participants 18 years of age or older who had lived in a high-rise building on the Beachfront for a year or more. The intention was to interview as diverse a cross-section of residents as possible, and identify the extremes found within the system rather than the most typical cases.

While it was considered vital to capture the full range of high-rise dwelling experiences by talking to people of differing age, race, background and SES, I knew finding residents willing to be interviewed by a stranger inside their flat would be a challenge. Add to that the size and scope of the study plus the resource and time limitations, and the risk was high. It was never a sure thing that the initial research design would work, but methods were adapted or refined as necessary to garner usable results.

In each building, the supervisor was presented with three possible sampling methods, and asked which they preferred. The fourth method was intended as a back-up strategy to fill gaps in the dataset by attracting residents of buildings that had not been selected, but quickly became the most effective way to identify suitable, willing interviewees.

1. FLYERS

Envisaged as a standalone method of attracting participants, small (sub-A5), single-sided flyers were intended to be popped into the post boxes of entire buildings at once. Containing a little information on the study, flyers appealed to residents to contact the researcher via SMS, WhatsApp or email, and they would receive a call back. Few blocks favoured this method. Supervisors said people seldom check their mailboxes, and mounds of paper waste, particularly advertising, tend to pile up. The flyers turned out to be more useful to supplement Method 3, as something for the Supervisor to give a potential respondent to take home and stick on the fridge. Handed over personally, the flyer became more akin to a personal invitation.



Fig. 85: Method 1, the flyer.

2. POSTERS

Few buildings allow posters that are not related to management or regulations, so this method was used least. In three cases where it was preferred, the A4 or A3-size colour poster was pinned on the lobby noticeboard; inside the lift car(s); or in one case where the lifts did not work, on staircase landings. Only two interviewees contacted me after seeing a poster in their building.

3: WORKING THROUGH THE SUPERVISOR

From the first scoping, it was clear that building supervisors would be key to accessing not only the buildings but the residents themselves. These supervisors were men and women (and a few couples) from all walks of life. Most were over 50, but

a few were young and ambitious. The ideal situation was when a supervisor was well established in their role, maintained strong relationships with management, were respected and liked by residents, and understood to some extent the value of research. The handful of supervisors fitting this description were quick to supply names and contact numbers for a selection of residents in their block. There was a risk that supervisors would consciously or unconsciously select people like themselves, but my brief to seek out as much variety as possible—not just of people but of unit sizes, designs and locations within the building—was taken very seriously. Interviews in blocks with such supervisors were completed early in the year.

Initially, many more supervisors said they were happy to assist me, but ended up not doing so for different reasons. The managing committee refused access, or the supervisor was at odds with the committee (or was disempowered by them, and therefore afraid to take on anything new for fear of being chastised), or they were just too busy. A few supervisors were obliging at first, and would ask me to return again and again, sometimes expecting me to sit and chat for hours in the office, but never put me in contact with anyone.



Fig. 86: Method 2, the poster.

4. SNOWBALL SAMPLING

The fourth method entailed asking every interviewee, on record at the end of the session, whether they knew anyone else living in the study area who might agree to participate. Initially an afterthought, this turned out to be by far the most successful way of identifying respondents, particularly if the individual who'd already been interviewed contacted them first: *"I've done it and it was easy… fun, even!"*

I'd ask people to refer me to the person(s) they considered most different from themselves, and while I expected most to refer candidates based on geographical proximity, this was not the case. Some did refer one or more of their 'dissimilar' neighbours, but it was just as common for them to refer people with a similar socio-economic profile in other buildings, who they had met through neighbourhood activities or knew prior to moving to the area.

This method opened up the research by inviting more geographically random encounters, but simultaneously increased the chances of reaching saturation, or skewing the results by interviewing too many 'like' individuals. To maintain a balanced sample, I had to be conscious of who I pursued.

Having established a set of buildings across the study area representing a range of sizes, configurations and ownership structures, I went to see each supervisor and dropped off a business card, a sample participant information letter equipping them to answer more detailed questions, and a permission letter to be signed by/OBO the Body Corporate, Board of Directors (BoD) or building owner. Letters were addressed personally, and included the possible methods of soliciting participants, followed by a note to say which of the three their supervisor preferred. This showed that I had done my groundwork and made an effort to accommodate them.

Late November was not the ideal time to begin the process, given the influx of holidaymakers for the summer holidays, and the fact that many wealthier owner-occupiers (who tend to make up decision-making committees) vacate the Beachfront over this period. Several permission letters were misplaced. A few travelled overseas, others landed at the bottom of piles of paper on the supervisor's desk, and still others disappeared from email inboxes. All were quickly and cheerfully replaced.

It was over two months before the first permissions were granted, and the last signed letter was received in late May 2018. One Body Corporate asked to see my ethics approval. Then, given the sensitivity around government-subsidised housing, the SHC in charge of Hawaii requested a copy of the questionnaire, and asked me to remove four questions (Q11-14) pertaining to the size of the flat and monthly rental, which I did. While the approvals process for buildings owned by a company or institution were more rigorous and multi-tiered, they were easier to navigate overall as there was more clarity with respect to roles, responsibilities and communication hierarchies, and staff were less thinly stretched and less emotionally invested.

Over 90% of the buildings where research took place, called 'surveyed buildings' from here on, were sectional title blocks, shareblocks, or had a mix of the two ownership structures. Governing bodies were often plagued by in-fighting arising from conflicting interests, opinions, or egos with respect to the occupation, running, or maintenance of the building. This was observed to be worst in buildings where the dominant population group was different to that of the (often historical) supervisor. Obtaining consent to carry out research in these buildings was particularly difficult. Of the 35 blocks of flats given permission letters to sign, 22 granted research access, five did not want research on the premises, and eight did not return the letters. In at least two cases where supervisors were empowered owner-occupiers who knew the Chair personally, permission was granted verbally. One such supervisor, who had an absent chairperson and was forever given the run-around by her Body Corporate, said a letter was unnecessary and she was happy to assist me directly. As far as she was concerned, my activities had nothing to do with building management. As she put it: "If a resident invites you into their home as a guest for whatever reason, it's nobody else's business but yours and theirs!" This sensible approach—viewing an interview first as a one-on-one interaction before it is a data collection instrument—helped me relax into this otherwise rather daunting process. Later, when invited to interviews in buildings where I hadn't previously been well-received, this helped me approach with confidence.

The initial target number of participants was around 200, which I felt was needed to adequately cover the large study area. The spatial nature of the enquiry meant data was always intended to be collected on-site (inside residents' units), but the realisation that instead of surveys they would need to be intensive, self-administered interviews came later, once the literature made it clearer what needed to be asked and how. When the idea of administering a survey with the help of research assistants fell away, the target sample halved. The decision to carry out all interviews myself meant the volume of data gleaned from each session would increase. Finally, I had to accept that this was bound to be an iterative, emergent process and that any discomfort with unpredictability must be pushed aside when undertaking research on human beings as opposed to bricks and mortar.

The Questionnaire

As the primary data collection instrument for this study, the questionnaire had to be thorough and well-structured. From the outset, it was designed to enquire into the dwelling experience at four different scales:

1 The individual
2 The unit
3 The building *and*
4 The neighbourhood

As mentioned, the investigative lens was inverted to expand through scales and more closely approximate the insider perspective. I enquired first about the person themself, then a little about their family and background before moving onto their unit and the way they occupied it, then the way that unit fitted into the building, how the building was operationally and socially configured, and finally how it sat in the broader neighbourhood. Working from the most intimate (private) scale to the broadest (public) meant that each part of an interviewee's narrative could build on what came before.

Gifford's (2007) review of the effects of living in high-rise buildings was key to establishing the type of information that needed to be gathered in interviews. It identified seven moderating factors likely to affect outcomes for residents ('socio-economic status, neighbourhood quality, parenting, gender, stage of life, indoor density, and the ability to choose a housing form') and a further two (resident culture and dwelling design) that studies suggested were causally linked. These nine factors were instrumental in shaping the questionnaire in its early stages. In refinement, three doctoral studies offered data collection insights:

- The Mackintosh study (New York, 1982) of the Meaning and Effects of High-rise Living for Middle Income Families: A total sample of 120 residents across three sites, comprising husband and wife couples with at least one child aged between two and ten, each separately answered a questionnaire in an interview. The 59 questions, both empirical and open-ended, enquired into details of respondents' lives including reasons for moving there, space usage, interactions with neighbours, aspirations, and feelings about city living. Each individual was asked to fill out a 'time budget' for a typical day.

- The Morris study (Johannesburg, 1999) of Race Relations in Post-Transition Hillbrow: In this two-stage research design, a percentage 'equal probability' sample of 396 flat-dwellers was surveyed by field workers. Fifty of those were then selected for in-depth interviews with the researcher. Snowball sampling identified 20 foreign African residents to interview (an underrepresented group), an additional six child residents, and 100 mixed stakeholder interviewees (with caretakers, landlords, agents, business owners) completed the dataset.

- The Erwin study (Durban, 2011) of Place, Race and Identity in Albert Park: Ethnographic research was undertaken through immersion whereby the researcher moved into a flat in the inner-city neighbourhood for nine months and thereafter visited regularly, basing herself on a folding chair beside a pavement stall. Ultimately, 15 in-depth interviews were conducted with participants identified through repeated interactions with the researcher, and asked a series of open-ended questions in the manner of life history interviews. Much of the information in this study came from observation and informal conversations.

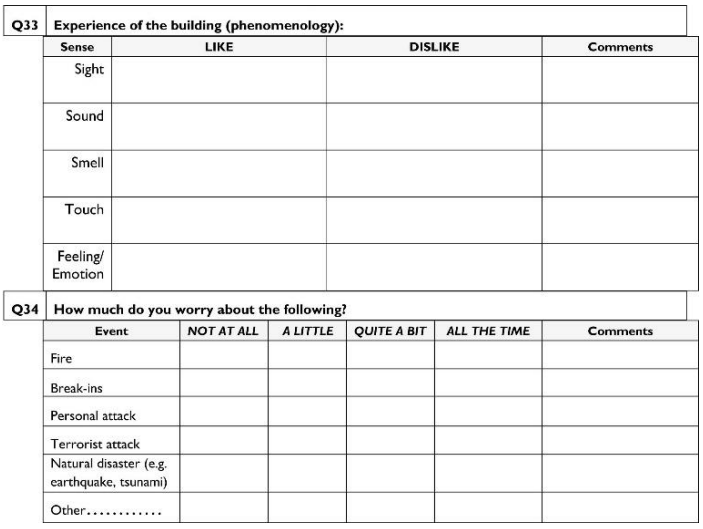
The primary instrument had to fulfil a dual purpose, the gathering of both quantitative and qualitative data, and the aim of the pilot study, upon which ethics clearance was made conditional, was to test and refine the questionnaire. Six individuals from two buildings were interviewed for the pilot study, between October and early November 2017. This was helpful, and although the content of the questions changed very little, the way in which some were asked did change. A few were moved around or removed entirely, and one or two were added. The final questionnaire comprised 48 questions and fitted onto three A4 pages, with a fourth reserved for 'office use' (see Appendix B).

Each of the four sections began with quantitative questions, which were easier and quicker to answer. At the personal level, participants were asked for their age and gender, then to describe their identity in their own words before placing themselves in one of five race categories. These categories were the same as those used for the dot maps derived from 2011 census statistics, the conceptual starting point of this study. While I felt these categories important to interpreting the findings within the historical context of segregation, and acknowledge their usefulness as a way to monitor redress, their adoption in this research should not be taken as recognition of their future validity. In fact, the 2011 census appears to be the last time these categories were used for this purpose, as respondents in the 2022 census were asked for their ethnicity, with no fixed categories. At subsequent spatial scales, the questionnaire asked for a flat's size and cost, the number and relation of occupants in the household, and their approximate monthly income. As most empirical data regarding the building was gathered outside of interviews, the questionnaire focused on quantifying the social interactions and the lived experience of dwelling in a high-rise. At neighbourhood scale, I enquired into how the respondent got around, where they went to fulfil their daily needs, and their use of beach-related amenities.

Each section had a qualitative component, where interviewees were asked their opinions such as what they liked, disliked, or would change. Questions such as "*What is your favourite thing about the design of this flat?*" or "*How do you feel about the other people who live in this block?*" usually led to stories illustrating the answer. These volunteered anecdotes gave deep insight into the experience of inhabiting differently-designed and -managed buildings in the inner city, and more than any statistical findings, suggested explicit ways in which residential space can be configured to achieve more desirable outcomes.

The two longest questions, asked at the third (building) level but covering all spatial scales, were the most experimental. Question 33, I explained to participants, was my attempt at using architectural phenomenology to better understand how buildings are experienced with the senses: sight, hearing, smell, touch (hot/cold, rough/smooth), and lastly feeling or emotion, which here replaced taste.

Architecture, writes Pallasmaa (2012: 63), is set apart from other art forms by the possibility of action, which implies a bodily reaction. In the home, this might involve cooking, socialising or sleeping. Here, I aimed to establish the stimuli, positive and negative, occurring in high-rise living environments, the extent of their effect on residents, and how they might inform design aspects such as a plan layout or choice of building materials. Although a bit abstract for some, others said they liked this question because it made them think about things they usually wouldn't.



Q33 Experience of the building (phenomenology):

Sense	LIKE	DISLIKE	Comments
Sight			
Sound			
Smell			
Touch			
Feeling/ Emotion			

Q34 How much do you worry about the following?

Event	NOT AT ALL	A LITTLE	QUITE A BIT	ALL THE TIME	Comments
Fire					
Break-ins					
Personal attack					
Terrorist attack					
Natural disaster (e.g. earthquake, tsunami)					
Other.....					

Fig. 87: Experimental questions 33 and 34.

Question 34 attempted to quantify how much residents worried about certain occurrences. According to Gifford's (2007) review, at least six fears can be linked directly with living in a high-rise building, some of which could reasonably be expected to be exacerbated by living in a high-crime area beside the sea. Respondents were asked how much they worried, from 'Not at all' [0] to 'All the time' [3], about five safety threats: fire, break-ins, attack to their person, terrorist attack, and natural disasters such as mega-storms, earthquakes and tsunamis. A sixth category accounted for any additional worries. This resulted in a generalised 'Landscape of Worry' for the study area, sparking discussions around previous

incidents and unarticulated fears. These answers often brought heart-warming insights into the average South African's relationship with fear and personal safety, and the way in which neighbours in collective dwellings band together in times of crisis.

The last part of the questionnaire consisted of five general questions to round off the interview. These included overall satisfaction with a participant's living environment (out of 10) and whether they considered their flat home. The final question, "What would you change if you could?' aimed to end the session on a positive note, encouraging interviewees to dream and perhaps suggest facilities, amenities or spatial configurations that could potentially work in a future Verticolapa.

The Interviews

Explaining the interview to potential respondents, I came to describe it as "a cross between a census and a celebrity interview". After making first contact via telephone, each candidate was given an information letter outlining the four spatial levels of inquiry and the types of things I'd be asking them: *How big? How many? How do you feel about…? Where/how far do you go for…?* This was to help candidates make an informed decision on their participation. Most pilot study respondents admitted to not having read the letter, so it was simplified. By far the most challenging part of the research was finding volunteer participants who represented anything near the full demographic spectrum and variety of living conditions found on the Beachfront, and who were willing to invite a stranger into their home.

On crossing the threshold into a participant's flat, I was no longer the expert or the teacher; I was the layman or student, deferring to the master of this domain. Each interview began with the ritual of the participant signing a Consent form and me reminding them of their right to withdraw at any point. I elected to jot down short answers on a printed questionnaire, and record the interviews with a Dictaphone, which freed me up to maintain eye contact with interviewees and respond easily. Maintaining flow, with questions naturally pre-empting or leading into one another, was important in turning a formal interview between strangers into something more akin to a conversation between friends. In some instances, participants began by asking more questions of me than I did of them. I took this as a positive sign that they were comfortable with me, and felt it important to let them ask whatever they wanted and to reply honestly.

As I gained experience, I learned to better read people, knowing how and when to encourage them to provide more detail. "So how did that (event) make you feel?", "Tell me a little more about that (object/event)", or "You mentioned earlier that…."

Each interview was concluded by taking a documentary photo portrait of the participant in their flat. Most were shy, and grumbled before agreeing to be photographed, yet even those who refused for religious or other reasons were apologetic. For confidentiality, none of these photographs have been used in this document.

At the end of each interview, I gave respondents the opportunity to assign their own pseudonyms for the write-up. Most found this difficult, preferring their real name, or asking me to choose one for them. Nobody insisted on their real identity being used, and later, to bolster confidentiality, I ended up changing not only all participant names, but their ages, too.

Most interviewees said they found the interview pleasant, some even enjoyable. A handful expressed gratitude for the opportunity to self-reflect, saying it had helped them frame thoughts they had never vocalised before. Others appeared to gain affirmation from the experience with respect to their chosen way of life or epistemology, or just by having someone listen to them. Still others were grateful for the company, and a few sought to establish friendships with me after their interview.

Other Data Collection Methods

A key goal of this study was to capture the diversity found in the area, so instead of generalising to try and establish the profile of a 'typical' Beachfront resident, I deliberately sought to demonstrate the radical differences present in a relatively small geographical area. From the outset, the most interesting and (in research terms) valuable findings came from buildings with a high level of socio-economic diversity, reaffirming the hypothesis that diversity in residential environments is key to more spatially just South African cities. A targeted one-on-one interview was the perfect data collection tool for residential buildings where units were independently owned or rented, and where mixing naturally occurred, but it was less useful in buildings occupied by 'like' sorts of people. Early interviews confirmed my supposition that individuals with similar demographic profiles would respond similarly to my questions, so I took a different approach in buildings with homogeneous populations.

A secondary data collection instrument, the facilitated Focus Group Discussion (FGD), replaced interviews in two building types: Student Residences (SR) and Retirement Homes (RH). Occupants of these buildings represented a narrow segment of the broader society—in the case of residences, exclusively Black students aged 18-25 years and enrolled at the same institution; and in homes, a vast majority of White residents, mostly female and all over 60. The FGD, when adequately attended, was a good way to assemble a more detailed picture of how these two groups interacted with and felt about their living environments. In both cases, after management

permission was granted, on-site liaisons helped me to identify and invite individuals who represented some variety within the spectrum. This included those known to have strong views on the subject, or to be particularly eloquent, astute, or socially active.



Fig. 88: The A5 invite for a retirement home FGD. For students, I created a phone-friendly invite distributable via WhatsApp.

The format made it easier for individuals who may not have been able to commit to an interview to participate. It also provided an opportunity for residents to discuss things in a confidential, non-threatening space, which brought out similarities and differences in opinion and experience that could be examined relative to existing socio-spatial structures.

FGDs were guided by four questions intended to initiate discussions of around 20 minutes each:

Q1. What was your housing situation (building type and neighbourhood) prior to coming to [XX], and how does it compare to living here?

Q2. As with any block of flats, different units/rooms here are different sizes and have different orientations and layouts. What do you like/what works well about the design of your particular living space, and what do you feel could have been done better?

Q3. What communal (shared) facilities exist here at [XX], and how do you use them? Are there any that you feel are missing or would be nice to have?

Q4. In some ways, a block of flats/residence can be viewed as a 'vertical community'. Given the choice, what kinds of people do you want in your community, and who would you rather *not* live with?

The pre-arranged meetings with groups of volunteer participants took place in a common area inside the building, and lasted around an hour and a half. My role was to facilitate the discussion, steer it back to the topic if it strayed, defuse any tensions, and ensure that participants got a chance to speak. At the end of each session, a participant took me to see different units in the building, as well as its shared spaces and amenities.

Three FGDs were carried out. Discussions in retirement homes Edenroc and The Parkview drew a total of 15 and two participants respectively. In DUT's Baltimore Res, the discussion involved eight students, mostly third-years, and for the second half, they were joined by their Res Advisor who lived on-site with her family in a unit identical to the 4-bed dorms. She also agreed to be interviewed as an independent adult dwelling in a situation similar to that found in any ordinary South Beach block of flats.

Prior to beginning this research, I had lived in a 7th floor sea-facing flat in North Beach for just over a year. In the five-plus years taken to complete the study, I lived in five more flats of differing size, orientation and design, all in the same building. Complete immersion in the study area and subject matter over an extended period meant I came to understand the rhythm of the tides, cycles of day and night, and the seasonal flux, but also the slower, smaller changes occurring over the years. This allowed me to witness and record things an outsider would probably have missed. From the outset, observation was an important way of supplementing the information gathered, particularly at building and neighbourhood scales.

Observation was also a key component of every interview. Page 4 of the questionnaire had space for two quick sketches—one of a flat's position within the building footprint, and another of its plan layout—to go with my notes on building access, circulation, condition and other relevant details. During the write-up, selected unit plans and their furniture layouts were drawn up in CAD to illustrate a variety of architectural designs but more importantly, how spaces are inhabited. To fill in gaps in building-scale information (footprint size and orientation; structural and façade systems), Google Maps, specifically Satellite, Globe and Streetview images, proved invaluable.

Early on, field notes were useful to record content-rich conversations, but as soon as scoping began, I was taking notes in a more structured manner so this all but ceased. In terms of a visual record, I already had many photographs of the area—of the sea, sky, buildings and public spaces—and so photography was a method of documenting urban space that came naturally. Where I had permission to carry out research in a building, I would photograph both its exterior and common areas (lobby, circulation spaces, shared facilities). Where I didn't, I worked from memory. Time and occupant permitting, I would go swiftly from room to room after the interview photographing flat interiors as visual reminders. Altogether, around 1580 photographs were accumulated during the research process.

Lastly, informal conversations with everyone from street people to tourists to UIP guards provided a sturdy framework for my housing narratives. Ordinarily I chat to people all the time, whether acquaintances or strangers. During the research, I began to make a point of doing so intentionally—in the lift, street, shop or bar—even when it was the last thing I felt like. The

more people who were aware of my study, I figured, the better my chance of finding participants.

Researcher Positionality

As I came to understand more about positionality and sociological research, I realised that employing one or more assistants to carry out interviews would make it considerably harder to process all inputs equally, so I decided to do everything myself.

Embarking on the interview series, I was hyper-aware of my own positionality, particularly with respect to race. A White, heterosexual, able-bodied female with three university degrees, there was no question as to my privileged status, and I was concerned from the outset that this would negatively affect the study. How people would react to me, whether they would trust me enough to let me into their homes and confide in me, the validity of the findings… even the way in which I interpreted and reported the data, I worried, might ultimately be flawed.

In time, I recognised two ways in which my positionality was in fact an advantage. First, I believe my gender and perceived class (a factor of my education, and in this context also my race) both acted in my favour. At a basic level, this likely came down to security of self and home. My SES meant I was unlikely to want for anything, implying no reason for me to turn to criminal activities such as stealing items of value or surreptitiously gathering information for burglars. Women tend to be perceived as less threatening than men, and I was probably more readily accepted into people's homes for this reason.

Secondly, I believe my personality smoothed the fieldwork considerably, something that didn't cross my mind until interviewees pointed it out. On paper I fit snugly into the box already described, but in person I defy easy classification. An energetic, cheerful disposition and unusual dress style, coupled with the fact that I am intentionally unmarried and childless in my mid-40s, make me an anomaly in this environment. Due to the limited culture of research in the country, I only encountered a handful of people who had been approached for similar purposes, and most had little or no idea what a doctorate degree is. Interviewees were curious, and I guess that by being different from what they were used to, I somehow became more endearing to them. At the same time, having travelled and lived all over the world seems to have given me the confidence to move through urban space as if I belong there, something I only noticed when people in foreign cities—tourists, but also locals—began to ask me for directions.

This brought to light a third way in which positionality aided my endeavours: that I was an insider with respect to my subject matter. Approaching potential interviewees, I learned to say in the first few lines that I lived in a flat in the area, and regularly used phrases like "I'm a Beachfront girl" and "in my 'hood". More than a few times, wariness turned to relief when I said this, and I believe it was the only reason I was granted an interview. While technically still a stranger, my status had shifted from Outsider to Insider by virtue of common geography. These small subtleties in human interaction nourished my thinking around the roles of both Stranger and Community in inner city residential environments.

Capturing and Analysing Data

A hybrid research design combining qualitative and quantitative data requires complex methods of consolidating and processing information, the vast majority of which was derived from the answers to 101 self-administered questionnaires. The first step was to capture the interviews, each of which was given a unique chronological number, from the scribbled answers and notes on the questionnaire, while listening to the audio recording. For this I used MS Excel, one sheet per interview, all on the same template. Having all the summary data collated in only three spreadsheet files proved invaluable. The programme was well-suited to the questionnaire's tabular layout and accommodated numbers, words and paragraphs of text which could be searched and selectively copy-pasted into other software for more detailed analysis. Snippets of 'next level' information (stories and anecdotes) were summarised in cells to the right of the question to which they related. Where a direct quote or more detail was required, it was easily traced back to the audio file using the interview number and question sequence, and transcribed word for word.

To process quantitative information, I used SPSS Statistics, a programme well-suited to sociological research and able to accommodate and analyse large volumes of data. Only a few questions that were already multiple-choice or bracket-based (e.g. race, income bracket) could be input directly into SPSS. Others, such as a respondent's age and level of education, were assigned categories or brackets afterwards, and the answer recorded in the corresponding one. For example, a 33-year-old with a BComm would be captured in pull-down categories '25-35 years old' and 'Undergrad Degree'. The pie chart was chosen as the simplest way to illustrate the distribution of a particular aspect across the dataset. SPSS was also useful for post-analysing data not initially linked, so comparing respondent satisfaction with the floor level of their unit or establishing whether a correlation existed between household income and indoor density. Graphs and tables were most useful to illustrate the relationship between two variables.

The interview contained several qualitative questions such as *'What do you like most about this building?'* designed to solicit short, descriptive answers. The

answers fell into one or more themes (e.g. security, people, proximity to the sea), so were captured as occurrences in a themed category in a separate Excel spreadsheet, with new categories added as necessary. Qualitative questions with more than one answer were analysed by means of an even more complicated Excel matrix, converting qualitative into quantitative and then back to qualitative data. This method, I developed to analyse and interpret the written data gathered during large-group co-design workshops for WDC2014. Counting and ranking the occurrence of responses made it possible to extract information on what a built intervention needed to do, how it should work, and how its form and aesthetic might best respond to the local context and user aspirations. This method was used to analyse the outputs of two question types that focused on the totality of the dwelling experience.

The first question type asked residents for their favourite and least favourite things at each spatial level, prioritising what they felt was the most important quality or feature to have or not have in a building, for example. Regardless of how the question was phrased (*"What do you like the least?"* or *"What is your least favourite thing?"*) most people cited two, some four or five, all of which were recorded. Strong similarities emerged across the dataset.

The second question type, the phenomenological enquiry, sought to establish the nature and source of different environmental stimuli associated with high-rise, high-density urban living, and the links between them. For the five senses (sight, sound, smell, touch and emotion), respondents were asked to name anything that came to mind, good or bad. Some only populated half the boxes with one word each, while others thought of multiple key words for every box. For example, asked for *'Negative sounds associated with your living environment'*, a participant might report unpleasant noises at all three spatial levels (Unit/ Building/Neighbourhood), and expand each into a story. Key words were captured in the column representing the (most) relevant spatial level, in a themed cell most closely fitting that answer, and the occurrences of each answer were tallied at the end. Broader in scope, this question naturally attracted a wider range of answers, albeit with much repetition.

Combined, the information derived from these two question types delivered a nuanced representation of assets and issues that, although not inherently spatial, have spatial causality or implications. Understanding how stimulus travels, is perceived, and interpreted, can suggest possible environmental design responses. For example, an interviewee might cite vagrancy as his least favourite thing about the neighbourhood, something an Architect has little control over, but phenomenological enquiry tells us that seeing vagrants digging in bins makes him sad at the suffering of others, angry at systemic inequality, and embarrassed seeing beggars harass tourists for money. Together, these snippets of data offer insight into how the design of spaces (buildings, thresholds, streets) and systems (waste management) are interconnected, and how design might contribute to improving situations traditionally thought of and treated as purely social—in other words, as a tool to address spatial injustice.

Analysing phenomenological data this way was not easy, especially when it came time to assign data to the appropriate spatial level, as our senses have no boundaries and we do not register stimuli first by their proximity. We can see further than we can hear; a scent must be within a certain radius for us to smell it; and a surface even closer for us to register its tactile quality. Emotion, with no concrete spatial component, is at once internal to our body and omnipresent. Moreover, not only are most sensory stimuli experienced involuntarily, but our reactions to them are highly personal. The aroma of one man's Sunday lunch may smell ghastly to his neighbour.

Lastly, there is no measure here of the strength of individual stimuli. An interviewee may list four irritating environmental sounds that are so faint and intermittent as to have little impact, and only one that profoundly affects their wellbeing: the rhythmic, soothing sound of the sea, which they love and battle to sleep without when away from home.

Interpreting and presenting research findings of different types and spatial scales side-by-side in this way acknowledges that they are too intricately interwoven to be examined in isolation. Cohered through a focus on the architectural form and ways of inhabiting, it becomes possible to trace out the ways in which urban form operates in relation to the pressing urban issues of inequality, segregation, and decline. It also spotlights a real tension between the nested, scalar approach through which the research moves, and the way participants' lives, revealed through ethnographic methods, constantly exceeded scalar categorisation. The coming pages record vibrant, exuberant, sometimes decaying 'life' flowing across, through, and despite the ordered scalar categories embedded in the survey instrument.

Writing Up

Writing up the research consumed far more time and energy than carrying out the fieldwork. The trans-disciplinary, experimental nature of the enquiry meant the document had to be structured in a way that was suited to presenting quantitative and qualitative information side-by-side, woven into a narrative that allowed the two to inform one another, at the same time fulfilling the minimum requirements of a doctoral dissertation.

The desire to include a high level of graphic content—charts, photos and drawings—was the main justification for using a two-column A4 journal format, which supported the standardisation of images into same-sized squares that could be inserted in-line and

read in conjunction with the text. I also believe this format to be more digestible for non-academic readers, particularly designers and built environment professionals for whom words are not the primary medium.

With respect to writing style, I sought a balance between the formal, assertive tone of academic writing and more informal, descriptive storytelling (the way information was delivered to me), to encourage more diverse readers to engage with the material. I tried to simplify information as far as possible without losing its nuance or rendering it dry, which involved cutting out jargon, adjectives and colloquialisms and resisting my tendency to include common-sensical observations or refer to pre-existing knowledge.

A particular challenge was writing about race. The race categories adopted in the questionnaire (B/C/I/W/O) served their statistical purpose, but using them throughout the document, while necessary for continuity and because respondents themselves used the terms a lot, felt uncomfortable, like they were somehow ratified with every utterance. In the write-up, I was made aware of my own tendency to unnecessarily racialize content—in a subconscious attempt to provide readers with as much contextual detail as possible—and, except when describing ratios or statistics, had to remove any inferences to race that were not put directly to me by participants.

In writing up the research findings, the most difficult thing was letting go of so much information. The intimate connection I felt with every single participant's (what might be called) spatial ethnography clouded my judgement, making it hard to choose between information that was fascinating and resonated with me personally, and that which directly answered the research questions and contributed to the end goals of the study.

When the time came, deriving design-level theories and a model from the intangible behemoth stored in my head was surprisingly easy, for which I credit years of architectural training, practice and teaching.

When an architect designs a building, they do so primarily in response to two things: the client's brief, which includes a budget; and the context, which includes the site and all its impacting factors. For a bespoke single-family home on a private site, the client's needs can be clearly articulated down to the fixtures and furnishings. For larger projects such as multi-family housing and mixed-use buildings, the client (usually a private company or public institution) generally only provides rough development parameters—the number of units, their size, typology and sometimes a preferred architectural style or theme. In this scenario, the end user is not known.

Ultimately, this work seeks to establish a new way of producing integrated high-rise housing, which implies reconceptualising not just the development process, but it's instigator: the client. Instead of generic housing that accommodates what is believed to be a typical end user, what if a single building had, written into its DNA, the ability to adapt to the needs and desires of all 101 people interviewed for this study? Let us call this collective client 'Ze'. Ze represents at once all the stories, experiences, wishes and fears of those residing on Durban Beachfront today. Ze is at once male and female, an infant and a pensioner, dark and pale in complexion, able-bodied and not, rich and poor. Ze is complex and conflicted, being the oppressor, the oppressed and everything in between. Ze is the client for the model Verticolapa.

The recommendations distilled from a long and substantial enquiry are laid out in Chapter 12 as a set of design guidelines inspired by Christopher Alexander's *Pattern Language* (1977). They offer insights into all stages of the development process, from first inception and the formation of a client body to post-occupancy. They cover everything from participatory research and design, through densities and ways of mixing different ownership and tenure structures; establishing a workable number, size and distribution of units; arranging bulk on site; configuring circulation, management and operational systems and knowing what shared facilities to include; right down to the detailing of individual spaces, private and public.

The guidelines, which started to crystallise early in the research, were often inspired by the smallest things: the name sign at a building's entrance, the way residents gathered around a feature in the lobby or took charge of a garden, a clever plan layout or space-saving solution, balconies and thresholds that welcomed personalisation, and attractive building finishes that had clearly stood the test of time. The guidelines aim to empower built environment professionals by giving them the tools to make better design decisions, rather than dictating what exactly they should do. Instead of proposing an ideal density, height or parking ratio for example, I suggest how a suitable range of parameters might be calculated on a site-by-site basis. In the same way, I do not propose that one particular tenure or ownership structure is suited to all situations, but rather that a locally appropriate mix should be sought based on thresholds or mixing ratios that are shown by this and past research to deliver better socio-spatial outcomes. In theory, Architects all have at least a basic knowledge of the universal design principles applicable to any building type or context, and the guidelines are intended to supplement, not replace, this. They also aim to fill some gaps that exist in the development process as it is carried out locally, particularly in the commissioning and briefing stages and in a building's post-occupancy operations following construction and once residents have moved in. This aligns with the proposition to view a building holistically as a complex living organism that adapts over time in synergy with

the other organisms it hosts, rather than as a static container that belongs simultaneously to everyone and no-one. Having all the guidelines together in the same place and comprehensively written makes them accessible to a wider audience. In this way, they can be extracted from the broader dissertation and distributed more readily to anyone interested in the subject matter, from a Human Settlements official to a building supervisor to a student of Architecture.

Challenges and Limitations

The biggest challenge to the study was time. This was an ambitious undertaking to complete within the anticipated 3-year timeframe, and it took considerably longer. When the initial plan to employ research assistants fell away, timelines had to be revisited. Even capturing and transcribing the interviews, for which I had planned to seek assistance, entailed a level of interpretation such that involving anyone else would have resulted in inconsistencies and increased the risk of gaps in my own knowledge. A dataset this large and varied could only be managed by a single Central Processing Unit which, in this case, was my brain. Naturally, this limited the number of interviews that could be undertaken and consequently the amount of data that was collected.

Similar constraints applied to the theoretical framework and literature review. An interdisciplinary study of this nature has a plethora of references to draw from. I read everything I could get my hands on, ending up with far more information than could be used. As mentioned, the write-up turned out to be the most difficult exercise. What I know of academic writing had to be learnt from scratch while doing, from the overall structure of a dissertation right down to the nuances of referencing.

In terms of logistics, gatekeeper permissions to carry out research in individual buildings were tougher to acquire than anticipated, and only one body corporate communicated via email. Everything else was done by printing material and driving around to drop off and pick up documents, adding to the costs of hundreds of Rands' worth of airtime spent calling landlines in supervisors' offices.

Another challenge was getting participants to commit to an interview time, then stick to it. I nicknamed these participants 'eels' for their slippery nature. By and large, most people I'd approached face-to-face agreed straight away to be interviewed, and after reading the letter, a small percentage reverted to say they wouldn't be able to make it. The eels, however, would string me along, sometimes for months. Chatty and apologetic on the phone (when they answered), they would repeatedly buy more time, cancel at short notice, or stand me up altogether. One or two eventually ended up partaking, but I suspect most did not want to be interviewed and were avoiding having to say "*No*".

Some population groups were more difficult to access for interview and as a result were under-represented in the study, among them, younger working people and foreign nationals. It surfaced that residents of lesser means often had reasons for not letting a stranger into their flat. Overcrowding was likely the most common, but others included allusions to the 'state' of the unit (cleanliness, broken fixtures, or illegal DSTV or electricity connections), and the nature of activities taking place inside (informal business, narcotics, prostitution, gambling). Such residents seemed to exist in a liminal state, skirting the line of legality, yet were afforded anonymity and autonomy precisely by living in a dense urban environment.

One aspect of the study that promised to be quite straightforward, but which required more effort later, were ethical considerations. At approval stage, it was agreed that the research posed very few potential risks for volunteer adult respondents, and Category B Ethics Clearance was granted based on my proposal to retain participant confidentiality by replacing real names with pseudonyms unless expressly requested. I was surprised at how forthcoming many were with their personal information, some going into far more detail than was requested. Only one man chose not to reveal his household's income bracket. But in writing up the findings, I felt a growing discomfort. Despite the pseudonyms, linked to that name—either together in one vignette, or spread across multiple anecdotes—was the participant's age, building name, flat size, floor level, and sometimes a plan of their unit, along with details about their activities, other occupants, and children. During the write-up, after this was spotlighted by the Protection of Personal Information Act (PoPIA), I embarked upon a de-identification process, making sure to use a pseudonym for every single participant and also changing their age (but keeping within their age bracket). I removed references to unit location that were not directly relevant to the aspect being discussed. Then, when writing about sensitive issues, quotes were credited to a building, not a person. I had planned to include a few select photos of respondents in their flats after getting their consent, but decided there was no need. The only photo that contained a discernible human using indoor space, for which the consent to use had already been granted, was left in and the face blurred.

In the next six chapters, we dive headfirst into the world of a flat-dweller on the Durban Beachfront. In keeping with the methodological approach to the questionnaire and interviews, the findings begin with the smallest scale and work their way up, with each spatial level building on the previous one. The Individual scale is covered in a single chapter, the Unit and Building scales in two chapters each, and the Neighbourhood, in one full chapter.

In reporting the findings, I hope to deepen the reader's understanding of place, both with respect to a specific geographical location, and more broadly in terms of the meaning place accumulates through the relationship between buildings and their inhabitants, between space and its occupants. I encourage the reader to pause long and often to consider how cities, through better design, development and management, can be improved.

Chapter 6:

Who are the 101?

Findings – Individual

"The city can allow people to develop a richer, more complex sense of themselves. They are not just bankers or roadsweepers, Afro-Caribbeans or Anglo-Saxons, speakers of English or of Spanish, bourgeois or proletarian: they can be some or all of these things, and more."
(Sennett 2007)

From the outset, this study aimed to document the living situations of as wide a variety of Beachfront inhabitants as possible in terms of age, race, religion, background and socio-economic status, and their relationship to their dwelling space across scales: individual/unit/building/neighbourhood. Some population groups and buildings were easier to access than others, and as previously described, there was little control over who I was referred to in the first instance, and who I subsequently interviewed.

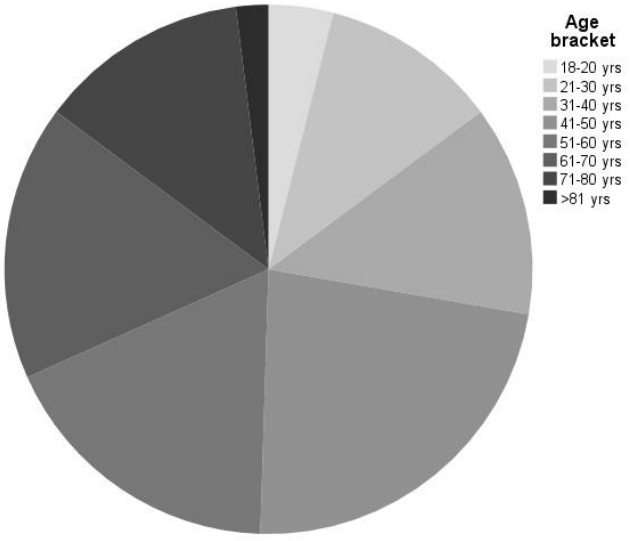
Gender

A little over half of those interviewed were female, 55 women to 46 men. This imbalance is likely due to the high proportion of female-headed households; women over the age of 40 living alone in flats (single, divorced or widowed); and in the case of couples, greater availability during working hours as a result of homemaking roles and reduced or flexible work hours.

Age

The age of participants was spread across the middle four age brackets, tapering at either end (under-30s and over-70s). Just under three quarters of those surveyed fell between the ages of 30 and 70. Those in the upper two brackets (50s and 60s) were even, those in their 40s were most numerous overall, and those in their 30s were least represented. The average respondent was 50.

The youngest four participants were 19 years old, and lived in South Beach. Three were students at local institutions—one sharing a rented flat with other students, and the other two lived with their mothers and siblings. The fourth, **Catherine**, was a young mother who had grown up in her mom's Carillon flat. She was born in Addington Hospital, as was her seven-month-old daughter, who had been delivered by two nurses living upstairs. Catherine spoke fondly of her childhood home, the sense of community across race lines, the kind people, and getting up to mischief with her 'block friends'. She loved the green view from their south-facing 4th floor flat—school fields, uShaka Marine World and the Bluff—and dreamed of having an open balcony. Catherine's favourite thing about the building was the social interactions and the fresh air. Although she was considering moving to Umtata to be closer to family, she would seek to live in an urban flat and would not feel safe in a house.



At the other extreme were two 85-year-old men.

Les lived in a 10th floor 2.5-bed flat in Key West in North Beach, owned by his sister. He had been there for 25 years, working as the building supervisor for a number of those. His wife had passed recently, and he had nursed her in the flat until her final days. He repeatedly mentioned his declining mobility and the preparations he had made "for when I go" (leaving the instructions next to the aircon), but Les was happy to stay in his home, a place full of good memories, and connect to the outside through the TV and his weekly shopping and church trips.

Gilbert identified as "a married Tamil fisherman", and had lived on the Beachfront most of his life. Born in the Somtseu Rd magazine barracks to a council worker father, he spoke fondly of his misspent youth "picking up *stompies*" in the street and fishing off the pier. His family was forcibly removed to Chatsworth in 1966, where he lived until the GAA was scrapped. For 35 years Gilbert worked as a City Parks Department horticulturist in North Beach's Amphitheatre Gardens, and after retiring, as a tour guide on the Ricksha Bus. With an eye on the spacious units in a mixed-use block overlooking West St Beach, he and his wife rented a flat nearby in the late '90s ("when we were allowed to") until an 11th floor unit in Belmont came up for sale. When I met Gilbert, he spent every day out and about in the neighbourhood and could check the fishing conditions as his wife watched from their flat window.

> "I'm famous down here, I recognise all the fishermen on the Beachfront, everybody knows me. I was born here, worked here and if it wasn't for the forced removal that broke my run, would've stayed here. Even then, I waited and waited, said 'one day, one day' until I came back. The biggest palm tree in the Amphitheatre Gardens, the one near the wishing well, was planted by me."
> ~ Gilbert, Belmont

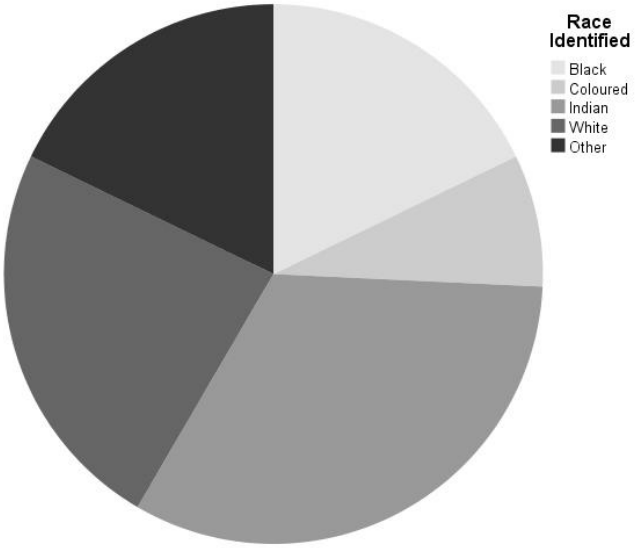


Fig. 89: The view looking North from Gilbert's flat window.

Les and Gilbert, while equally satisfied, experienced urban high-rise living completely differently; one almost completely disconnected from place, and the other so deeply attached that it become inseparable from his identity.

Race

Interviewees were asked to self-identify into one of five categories: Black, Indian/Asian, Coloured/Mixed-Race, White/Caucasian or Other. Given the country's history, I asked apologetically. Most of the time, the response was "not at all", and even those who felt categorisation to be offensive or unimportant answered anyway after making their feelings known. The spread of results is shown below.



Seventeen people classified themselves racially as *Other,* assigning their own descriptor. Five of those considered themselves first and foremost South African, four of them members of the human race, and three, African. Of the remaining, one each self-identified as Different, European, Indo-African and Brown respectively. Only one respondent, a young Congolese man living and working in North Beach, refused racial classification entirely, believing the question to be irrelevant.

The demographic most likely to identify as Other—more than half of this group—were White people over 42. A handful of participants classified themselves differently to how I would have, based on observation, and a few of mixed heritage placed themselves in the race group they felt most comfortable with. When **Levi** (22), a Ghanaian football player, classified himself as White, I checked he had not misunderstood, but he stuck by his answer. I assumed either he felt Caucasian, identified more with 'White' culture, or was making a statement on the question's irrelevance.

Zaid's (27) tough appearance contrasted sharply with his role as a doting father. Asked about his race, Zaid replied "Indian", to which his (Indian) partner looked surprised and laughed: "No man, you're Coloured!" He looked at her blankly, she looked at me, and I shrugged: "You see, that's why you classify yourself." This speaks to the increasing fluidity of racial identity in South Africa, particularly amongst younger people.

Asked about her race, **Serina** (23) replied "Indian… I think! These days I think a lot of people don't know what race they are. I went on a date with a guy this week, I thought he was Coloured but he turned out to be Indian. I was a bit disappointed, [ ] I expected him

to be feistier—he had the accent, the complexion, the look—and then I found out the guy's a proper Indian, so I thought okay, is he more traditional? All my questions for him had changed."

> "Issues don't stem from debates between ourselves but as a reaction to what we read in the media, what's happening in the country and the world. Everything's in a mess. With so much diversity, different race groups and religions, especially here in town and in a building like this, what would happen if there was a fallout, where would people go? What if they decided all the Indians must go back to India? I don't *know* anyone in India, I'm from Chatsworth! [laughs] It causes problems where there actually aren't any. I mean, you're always going to get a few select people who have race issues that stem from somewhere, but the African children born today, regardless of skin colour, have no idea what happened in the past. I don't know what happened to the people who were brought down or where my grandparents came from. We are all South Africans as well… [ ] It feels like they're just trying to stir things up, I think it's about power."
> ~ Serina, Marine Sands

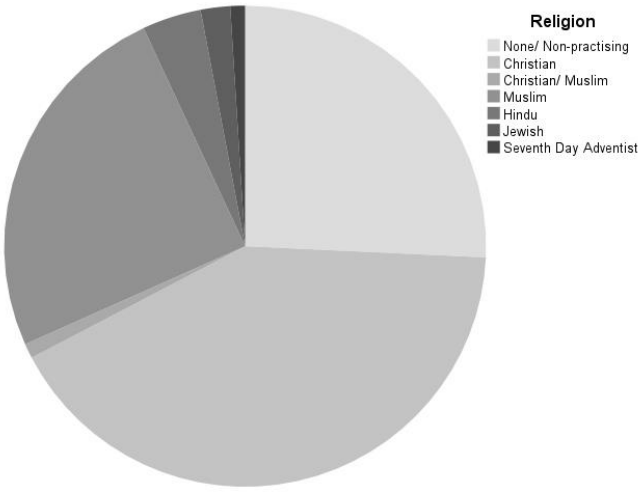
A Christian living in a Muslim-majority building, Serina referred to her neighbours by their religion—"this one's Hindi, that one's an Imam"—as though Islam had become a race group in itself. I found this 'new binary' way of seeing race captivating, shifting the focus away from ethnicity into a present where a group or individual's identity hinges solely on their belief.

Spatially, the dot maps derived from the 2011 census show race distribution in the area to be very unequal. The North Beach population is predominantly Indian, with a significant White population and few Black residents. South Beach has a mainly Black population, with a few Indian and White residents, most of whom live south of Addington Hospital, near uShaka. Coloured respondents were in the minority (numbering eight), and those I met lived at the 'bookends' of the study area, either in North Beach or near uShaka, perhaps clustering with other lighter-complexioned groups.

Religion

Interviewees were not asked what religion they followed, but rather about their place of worship. Sometimes faith was mentioned early on as part of their identity, or was apparent from their attire or the religious items displayed in the home. Christians made up 42% of the sample, and represented all race groups. The remaining two quarters were Muslims, and Non-religious or Non-practising. The latter group included anyone who considered themselves atheist, agnostic, humanist or spiritual.

Three correlations arose with respect to race and religion: All but one of the respondents identifying as Black were Christian; all but three followers of Islam were Indian, and; two-thirds of the None/Non-practising group were White. Apart from one Seventh Day Adventist, the rest of the sample were followers of Hinduism or Judaism.



Adam (29), who rented a large frontline flat in Fairhaven in South Beach with his Capetonian wife and new baby, ascribed to both Islam and Christianity, worshipping at the Masjid Maryam in town but attending a Catholic Church when visiting family in Cape Town. The only follower of Isiah Shembe interviewed, a single mom from Pietermaritzburg renting a flat in North Beach to be near her son's high school (GCHS), participated in the pilot study.

Identity

> "According to geographers and environmental psychologists, questions of 'who we are' are often intimately related to questions of 'where we are'. Indeed, many of the social categories that are routinely investigated by social psychologists are inextricably bound to notions of place, e.g. *community, ethnicity* and *nation*. Correspondingly, many of their research environments inscribe meanings about the identities of their users or inhabitants (e.g. *home, workplace*, and even the *laboratory*)."
>
> (Dixon and Durrheim, 2000)

Writing about place identity in post-apartheid South Africa, the authors quoted above explore how communities once separated and later identified with particular places were forced to re-evaluate their rank in the social order, redefining their identities once political and material transformation removed the barriers. I was interested to determine how this played out in the study area.

Describing one's identity in a short phrase, as respondents were asked to do, is not easy. Years of

box-ticking and classifying oneself by a 13-digit ID number meant that most people had never been asked this, and few had given it thought. I was asked often what exactly I meant by 'identity'. **Adam** feigned offense: "*Jislaaik* what a rude question, it's like you're asking for my Tinder bio!"

All 101 identity descriptions were captured to measure the frequency of occurrence of 18 different 'markers' that came up more than once. By far the most common was personality, or character traits—'bubbly, friendly, crazy, shy, easy-going, loving, strong or brave'—but also often as positive values or qualities—'honest, compassionate, fair, open-minded or hard-working'. A few described themselves as introverted or private, but most as sociable and outgoing. This is perhaps skewed by the likelihood that more gregarious individuals would be recommended for and agree to interview, but even those who claimed to keep to themselves typically enjoyed interactive lifestyles, whether they revolved around fitness, volunteering, or the building.

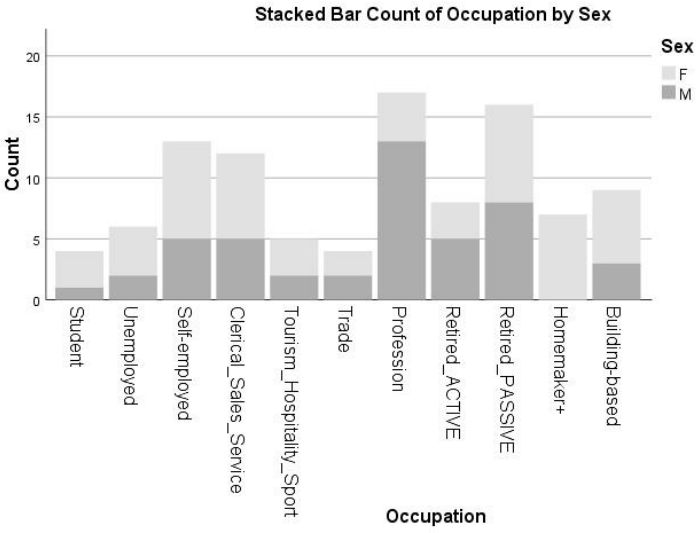
The capacity of urban high-rises to support utterly different personalities, sometimes even in the same household, was notable. In one case, a 67-year-old introvert was quite happy to relax up in his 17th floor flat, located on a busy North Beach intersection, while his wife and daughter enjoyed a night out at the pub and karaoke bar downstairs. In another, a bubbly lady renting a flat with her fiancé in Old North Beach, asked about their preferred entertainment, replied "a movie and a take-away at home" as her partner eschewed company. The avid surfer who had grown up in the area left the flat every day to surf, and when necessary for work, having built a life where he remained connected to the sea and outside world, but maintained his privacy and distance from others.

The 55 respondents who identified themselves through aspects of their personality were not the 55 women, though women were more likely to define themselves this way (60/40 split). The second most popular marker, gender was important to a quarter of the sample, one in five of whom were men. The third most common marker was nationality: 14 respondents labelled themselves "South African" and one each as "from Burundi" and "from Ghana". Close behind, the three categories with ten or more occurrences each were Race (B/C/I/W/O), Work (healer, engineer) and Family Role (mother, husband). In the next bracket down (six to nine occurrences), the leading marker was Religion, then Geographical—either provincial (KZN), city-wide (Durbanite) or local (a resident of North Beach). Some defined themselves as different or hard to classify (unique, mongrel). Also in this bracket were those who claimed an ancestral or traditional identity (Zulu, Tamil), and it is possible that some respondents who identified racially as Indian were also referring to ancestral or cultural ties. Three identity markers to crop up five times each were: Age (e.g. young, middle-aged), Continental (African), and Political (activist, liberal). Four people expressed a sort of 'non-identity', referring to themselves as a 'common person' or 'normal resident'. This was interpreted as a desire to blend in, to emphasise sameness or equality. Three participants claimed a global identity (worldly, global citizen), two each identified themselves by physical traits (short, dark in complexion) or as members of a community, and two were unsure how to answer.

Closely linked to self-identity is one's name. Most interviewees grumbled when invited to choose a pseudonym, asking "Can't you just use my real name?" One handful of ladies jumped at the chance to claim a name they had always loved. Another handful, typically women with long, traditional names like Sanelisiwe or Qurashia, chose common English names like Jane or Nicola. During interviews, 20% of the sample were happy to use their real name and 15% chose a nickname or shortening, but as explained in Chapter 5, all names were changed in the end to reduce the possibility of participant identification. When I chose pseudonyms on their behalf, I sought similar names from the same cultural or linguistic background.

Education and Occupation

Overall, the sample was a well-educated group, in keeping with the middle-class nature of the area. Just short of half (49%) held a qualification from a tertiary institution, around half had postgraduate degrees, and five respondents held doctorates. All completed primary school, and only 10% did not finish secondary school. The variety of occupations represented here was large, making them tricky to categorise, but I settled on the 11 categories shown below.



The student participants in the dataset studied full time. Unemployed respondents classified themselves this way, and the total did not include two who were temporarily medically boarded.

The self-employed group was third largest (13 in number) after pensioners and professionals. All ran their businesses primarily from home. The three alternative healers, all ladies, received client visits to their flats by appointment. Two of them, as long-time owner-occupiers, operated with the blessing of their body corporates, but the lady who rented reported a very different experience.

Masseuse and healer **Jillian** (48) had lived on the Beachfront for 12 years, first in South Beach, then Old North Beach, before finally "finding her peace" in North Beach. Previously, she had lived in the building next door, a small, close-knit shareblock with stricter rules where "everybody knew everybody else's business" and it was rumoured she ran a brothel. I did not ask whether this had anything to do with her move, but the relative anonymity of the block where she lived at time of interview was clearly a relief: "Here I can put up any curtains I like, burn incense as I like—it's so much more relaxed." Despite her efforts to keep to herself, a fire started by a candle had alerted others to her business activities. When I saw Jill a few months later, she was scouting for a sheltered spot to rent on public grass, as a neighbour had complained and management were watching her.

The freelancers working from home consisted of three IT consultants, a photographer, and a journalist. Others ran or consulted to companies with off-site premises, but spent most time in the home office—two in the clothing industry, and one each in cleaning, bookkeeping, and import/export.

Respondents falling into the Clerical/Sales/Service category included clerks, administrators and managers in the public and private sectors, the two most physically active of which were an operational assistant for the City Parks Department based at Funworld in Old North Beach, and a security guard for an armed response unit.

Those in Tourism/Hospitality/Sport could have been grouped with the previous category, but were intentionally separated to see if there might be a connection with the concentration of such activities in the area. Four of the five—two working in Beachfront hotels, one training with Amazulu FC, and one involved with Women's Golfing and a spa at uShaka Village Mall—turned out to be geographically linked.

The fifth, **Zahra** (45), was an inbound international tour guide for Emirates. An "indigenous African Muslim woman", her background—born in Lamontville township in Durban to an ANC activist father who took the family into exile in Mozambique—meant she spoke four languages fluently (English, Tswati, Zulu and Makuwa) and four quite well (Arabic, Shangane, Portuguese and Afrikaans). Her office was in Durban North, but she had decided to rent a flat in North Beach three years earlier for the lifestyle and convenience. She loved it, as did her "skateboard-crazy" nephew who lived with her. Sadly, Zahra felt it was time for her to buy property, but she couldn't afford a big enough flat in North Beach and was looking at houses in suburbs like Newlands West. She said she wouldn't feel as safe there, but missed the sense of community she'd had growing up, "having sociable neighbours, no high walls and not being isolated in times of need".

The trades represented actively in the dataset were welding, tattooing, and hairdressing. The other trades-people, among them a seamstress, printer, and dental technician, were retired.

Practising professionals made up the second largest group (17 in number) and included health practitioners, educators, lawyers, accountants, and Engineers. Around half the pensioners previously worked in a profession. Retirees made up the largest group, at 25% of the sample. Around half moved to the Beachfront 20 or more years ago, and the rest were evenly spread across the 'Time on Beachfront' categories, indicating a steady trickle of seniors seeking to spend their remaining days here. I counted pensioners living in flats in the community, but had I included the five buildings in the study area housing almost solely seniors (Edenroc, Eden Crescent, the Park View and TAFTA's John Conradie House & Langeler Towers), the proportion would be higher.

I was impressed by how active and independent many pensioners were, both physically (walking or cycling long distances, caring for grandkids) and in terms of work, which usually focused on their building or neighbourhood. One lady had served a term as the local Ward 27 councillor, and one of the men ran a bric-a-brac shop in the mall across the road.

It was common for retired owner-occupiers to play an active role in managing their building, whether as the chairperson, a trustee/director, supervisor (official or unofficial), or in an administrative role. Owner-occupiers of any age working full-time for the building had their occupation recorded as Building-Based, and comprised 5/10 in this group.

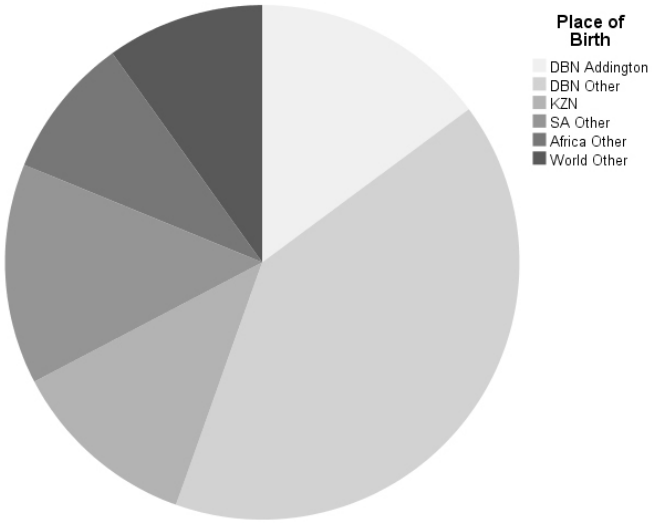
One such character, **Jake** (62), ran a well-kept frontline shareblock and was an institution in North Beach. He had packed in the corporate world 30 years earlier and adopted a uniform of dark running shorts and a sleeveless T-shirt which he wore every day, earning him the nickname *Kortbroek* [shorts]. From a Jewish background, the energetic senior once ran a 'surf braai shack' near the amphitheatre, was involved in running Mini Town, and owned more than one flat in his block. He was often seen chatting to residents outside the entrance, or directing staff in the garden or pruning palm trees on the pavement. Residents reported a 'nuisance-free' zone around the building, devoid of beggars, soliciting and car parties "because Jake doesn't allow it, he calls the Council". There existed here a reciprocal relationship between the building and municipal (Metro) police and urban management teams, based on continuity and a willingness for both parties to extend their efforts.

Notably, at least ten more buildings visited during fieldwork had an owner-occupier as supervisor. Of the five others who lived and worked in their buildings, two were assigned subsidised flats, two had flats included in their employment package (building manager for a SHC and Res Advisor for a student residence), and one was a security receptionist who lived in the staff quarters upstairs.

The last occupation, Homemaker+, accounted for eight women of working age whose primary job was as a mother. Four were Muslim women (two married and two divorced) with two to four children each. Three were well-educated, had worked prior to motherhood, and continued to partake in activities such as reading and feeding programmes in their spare time. The two youngest homemakers had one small child each and worked part-time, one as a waitress on the Point and another running a small aftercare in her flat while studying part-time. Both had their mothers living in the building. The last two had working husbands, and so had chosen to stop working themselves, one to support her teenage daughters through high school into college, and the other to be more present for her children.

Birthplace

The overwhelming majority, over 80% of respondents, were born in South Africa. Of those born elsewhere on the continent, the most populous were Zimbabwean ("Rhodesian", some said) and the furthest hailed from Egypt. Of the ten born outside Africa, six came from Britain or Ireland, three from elsewhere in Europe (France, Italy and Greece), and one was born in India to expat parents. Of the South Africans, fourteen were from outside KwaZulu Natal, most often Gauteng, followed by Eastern Cape. Of the Natalians, 12 were born outside Durban, with most citing Pietermaritzburg or rural KZN as their place of origin. The remaining 55% were born in Durban proper.

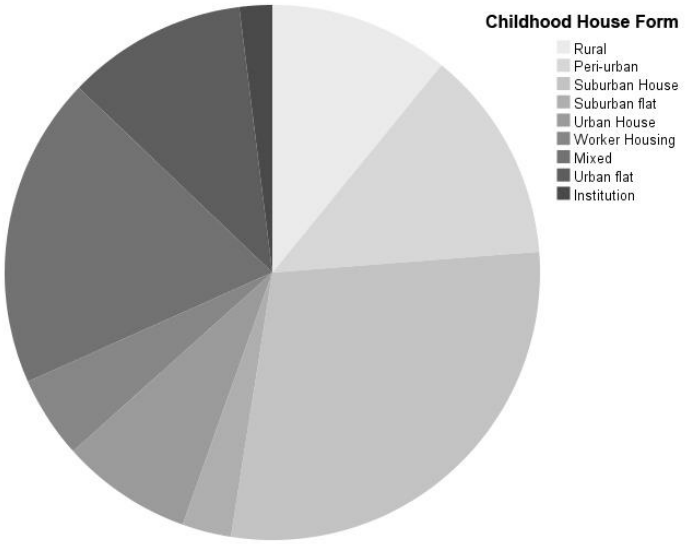


Addington Hospital sits inside the study area, so I began asking Durban-born respondents if they knew where they had first drawn breath. Over a quarter, a 'mixed bag' demographically, said Addington. Those born during apartheid were White, in line with the GAA, while those born more recently belonged to all race groups. A range of hospitals was cited, the most popular being inner-city St Aidan's which formerly served the Indian population. Birthplace is not critical to this study, but it is interesting that over half the participants today live in the city—and more than one in eight overall—in the area of their birth.

Childhood House Form

Whether one grew up on a farm, in a suburban house, or in a high-rise apartment, upbringing can be expected to influence the experience of living in an inner-city flat later in life. As was found in the Mackintosh (1982) study, I thought those who had grown up in flats might seek to live in them as adults, or report greater satisfaction with their urban high-rises than those who had grown up in houses, but this was not the case here.

The wide variety of childhood living situations reported proved difficult categorise, even more so because most interviewees had moved around a lot before turning eighteen. Some had moved mostly between the same house form, but usually it varied, so some generalisation was required.



Eleven respondents grew up in a rural area, in environments as disparate as a traditional homestead and a rambling colonial farmhouse.

Senzo (48), an owner-occupier and Chair of Bencorrum—a 334-unit, three-building complex behind the hospital and the largest block in the study area—described his upbringing in rural Eastern Cape, in the extended family of his father and uncles in a traditional Xhosa homestead of mud brick *rondavels*. His dad died when they were young, and his mother left to work in the city. He recalled cooking *phuthu* on a *potjie* on a fire and taking turns to skip school to look after the livestock. He had always loved tinkering with old radios, so he left Bizana after high school and went to Durban, where a trade diploma in electrical

engineering landed him work as a technician for a Beachfront hotel group. Senzo was satisfied since moving to South Beach nine years earlier, and was looking out for a bigger flat to buy in Bencorrum ("They're my family, my community"), but hoped to one day return to rural Eastern Cape.

Thirteen respondents grew up in what I classified as peri-urban surroundings: in a house in a small town or village, outside a township in a formal or informal dwelling, or on a smallholding. The largest group, nearly 30% of the sample, grew up in suburban houses with gardens. These represented the entire spectrum, from a seven-bedroom 'mansion' with a pool to a modest 2-bed township '6 x 9'. A small percentage of the sample came from a stable, two-parent nuclear family. Respondents were more likely to report being raised either by one parent, relatives (often grandmothers or aunties) or together in large, inter-generational extended families.

Zainab (37) couldn't enthuse enough about the joys of such an upbringing. As a child, she lived in a single-storey house on the edge of Umhlatuzana township outside Chatsworth, with a steep garden down to a river. One terrace had a pool, outdoor kitchen and *braai* area, and another, a small house her dad built for their domestic worker.

> "Every Friday [ ] was like party weekend. Everybody—aunties, uncles, cousins, even people who weren't related to us—would come and stay over. At times there must've been 40-50 people in the house. It didn't matter, we had a cover extending out from the lounge onto a porch, people wouldn't sleep, or would sleep sitting up or on the couch. [ ] You know, we could have just a pot of beans, but the joy and happiness from sitting there outside and eating together, wow!"
> ~ Zainab, Ottawa Court

When Zainab was 11, they moved from the house, rented for R800p/m, to Mount Etna, a block of flats in Warwick Avenue near the Early Morning Market where her (matriarch) grandmother ran a stall. Her father had since relocated to Johannesburg for work, so the family took over two 1.5-bed flats, neighbours-but-one. It was more confined than they were used to, but it was the separation (of units) rather than the closeness (of others) that proved challenging.

> "We so badly wanted that flat in the centre so we could do the interleading thing, we didn't know how to stay in separate places! Even though we had two flats, we'd all be in gran's flat at the same time. [ ] Nothing changed with my aunts and uncles and cousins, come Friday and everyone was there. You wouldn't care where people slept, they'd even sleep on the floor, but we were always together. [ ] Space wasn't an issue, we didn't feel cramped or squashed, for us it was a thrill. We only moved out when the building was condemned, but by then I had married."
> ~ Zainab, Ottawa Court

The young couple lived first in Barclay Mansions in South Beach ("where the lifts never worked") before moving to their current flat, a spacious, central 1.5-bed. Zainab worked in the family business which had grown to include multiple stalls, and cited the safety, convenience and sense of belonging as the things she liked most about her living situation, rated 10/10.

This, I classified as a 'Mixed' childhood in terms of house form, representing both low-rise, low-density and high-rise, high-density living. Just under 20% of the sample fell into this category. The 'middle road' between these two extremes is represented here by three categories of house form which, combined, make up 16% of the sample. They are: Suburban Flat, Urban House and Worker Housing—variations of attached or semi-detached low or mid-rise buildings from one to four storeys. This includes military and other barracks; some municipal housing estates; duplexes; inner-city detached houses, which no longer exist in Durban but are still common in other African cities; and terrace or row houses, the predominant European house form.

Unsurprisingly, half of those falling into these three categories were raised outside South Africa. Only two participants grew up in orphanages, both White and working as building supervisors. The lady (48) referred to her childhood in a colonial red brick building in Pietermaritzburg as "the best years of my life", still kept in touch with the girls who were "like family" and later grew close to her biological family. In contrast, the man (61) spoke of neglect and abuse at his Gauteng orphanage, a religious institution. Both respondents had found a comfortable home on the Beachfront, and rated their satisfaction 9/10 and 7/10.

The last group, who'd grown up mainly in urban flats, was 11-strong and diverse in terms of age and race. One particular building at the southern tip of South Beach was home to two of them. Built in around 1980, Port O Durban's architecture has a 'beachy', Postmodern style characterised by 45° angles. Consisting entirely of identical duplex units with protruding hexagonal balconies, it is painted light yellow with a big orange sun atop the lift shaft and another at the base.

Sumaya (23) had lived in a top floor flat with her dad, mom and sister her whole life. She had studied journalism, was a freelancer, radio reporter and blogger, and identified as "passion-driven", a "feisty, feminist activist". She led me on a comprehensive tour, describing what happened in every corner of the building, and confessed to taking hundreds of pictures of it from all angles, inside and outside, at different times of day and in different conditions.

Looking north over Addington Children's Hospital, every balcony in Port O Durban boasts a panoramic view of the sea, city and harbour, and is sheltered by virtue of being recessed into the lounge and by the protruding floorplate of the floor above. A brick balustrade 'unwraps' towards the east for protection and added privacy. The well-designed balcony was Sumaya's favourite part of the flat, where she spent much time staring out at the sea with her cat. As a toddler, she learnt about the balcony the hard way.

"When I first started walking, my dad needed to make sure [ ] I didn't fall off. [ ] So he sent me to the balcony with a chair and told me to stand on it, and when I came back, he hit me. And he told me to go again, I said 'No' and he insisted, and I went again and came back and he hit me! It was his way of saying 'There is only one repercussion for this action, and that's pain!'" The technique worked. "It's so ingrained subconsciously that often at night I dream I'm jumping down from balcony to balcony, or that the sea is right here and I'm standing on the balcony touching the water. [My block friend] and I used to get up to all sorts of nonsense. We'd climb on top of the lift core and sit up there, and there's even a spot where you can climb out a top floor staircase window and jump over to the roof of Rapallo next door. The buildings meet at ninety degrees and there's an 11-storey drop. [ ] This place is part of me, I can't describe how familiar I am with it. I can't imagine living anywhere else."

In Sumaya's dreams, she is a princess or captain, and Port O Durban her castle or vessel. The building had become interwoven with her identity even as she slept.



Fig. 90: Port O Durban (left) meets the side of Rapallo (right).

Having heard about **Philippe** (29) from one of his neighbours, I couldn't wait to meet him. A newlywed owner-occupier working in finance in Umhlanga Ridge, his busy schedule made it difficult to pin down an interview. On the weeknight in question, I waited in the Port O Durban lobby, as he was running late. A few residents offered to let me in, but I declined, waiting until a BMW dipped into the basement and my apologetic subject rushed up.

Philippe was born to a Rwandan accountant mother and a Burundian academic father, the fourth of five boys. Until he was six, they lived in a suburban house in Rwanda, but his mother died from illness shortly before war broke out, leaving his father to flee with the children.

"I was very young, but I remember leaving. Dad went to the cupboard to get his oldest clothes, because [ ] he just thought we were going to the next town. And then it was the next town, and the next, and we just kept moving, from Congo to Tanzania to a camp in Malawi. The Malawian government had just made a deal to send all refugees back to Rwanda, and my dad didn't want that. There were only two paths leading out of the camp. Dad told my two eldest brothers to go one way (they settled in Zimbabwe) and the rest of us went the other, back into Tanzania and down through Mozambique to the SA border, where we climbed over the fence of the Kruger National Park at night. We could hear lions roaring nearby. There were two other families with us, it was very organised, we were escorted on each leg of the journey, handed over to the next person and eventually driven down to Durban in the back of a police van. Some friends had come before us, and they accommodated us in their bachelor flat in South Beach, and that's how we lived for the first few months."
~ Philippe, Port O Durban

So began the long list of flats the family called home, all in or near South Beach, mostly in former Point Road. Philippe's father began guarding cars at the Motor Licensing Bureau in Morningside on weekdays, and on weekends at Addington Beach. In the 17 years he guarded cars, his family never went hungry. Philippe was too young to understand why they had to move so often, but it later became clear.

The boys had to learn English quickly, and although they had only attended schools in refugee camps and did not have documents, they were bright, with an aptitude for maths and science. The two youngest boys earned places at Addington Primary after a nun at their church, St Peter's, approached the principal.

Philippe recalls "working his butt off" in Grades 6 and 7 to earn a scholarship to Clifton, a top private school near his dad's workplace. From there he excelled, becoming the first head boy as the school expanded up to Grade 12.

"After the first flat we found a bigger place in Point Lodge (I think it's boarded up now), still sharing, then moved into the building next door, which is still

operational. After that, we moved to Manhattan, also in Point Rd, then further down to a block opposite the Wheel. [ ] Most flats were Bachelors, and if they were bigger, we'd always share with another family. I don't ever look back and think about it, it was just what we did. I only really noticed a difference when I began to attend Clifton. It was a challenge, I would come back in [that] uniform, they thought I was rich, that I had money, they didn't know how I'd gotten there, they'd try to rob me often. Of course I didn't have anything, but I didn't stick around to tell them that. I learnt to anticipate things before they happened. Next, we moved to a block on Smith St [ ], then to nearby Buckingham Court, then again to Martinez [social housing] when I was in matric. After four years at UCT, I came back to Durban and started working. By then it was only dad, my younger brother and me, and we rented a flat in Key West in North Beach. Four years ago, I decided to buy this flat. Dad lived with me until 18 months ago when I was thinking of getting married, and my brothers and I bought him a flat in Tenbury."
~ Philippe, Port O Durban

Tenbury was a few buildings down on the frontline corner, and one of my last interviews was with Philippe's father. Gentle, smiling **Pierre** (71) gestured proudly at his bookshelf, his 'library', the only non-essential item in the spotless space save for some traditional Rwandan baskets (*agaseke*), a carved wooden board game (*igisoro*), and a small Catholic shrine. Old family photos hung on the walls beside six graduation photos: his five sons and niece.



Fig. 91: Pierre's modest flat interior only hints at his family's inspirational life story.

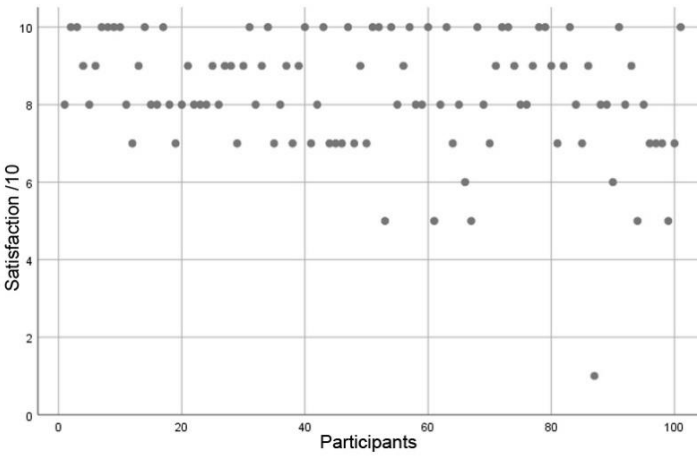
Satisfaction

In his review of studies on the consequences of living in tall buildings, Gifford (2007) concludes in summary that "residents will be happier in a high rise if they are not parents of small children, do not plan to stay long, and are socially competent". Of course, he reminds us, there are other moderators, and an occupant's lifestyle should match that provided by the building: "[A]vid gardeners will not be happy in a high-rise unless perhaps they can fashion a rooftop or balcony garden. Money helps: it provides the means to choose, to live in a better quality building in a better-quality neighborhood, and monied folk have greater opportunity to have a second home [ ] and to escape the high rise for holidays."

Given the diversity of this sample, one would expect some patterns to emerge in terms of satisfaction, but this was not so.

Overall, the 101 people interviewed for this study were satisfied living here. Only eight participants scored their satisfaction with their living conditions below 7, resulting in a mean score of 8.2 out of 10.

Despite the unusually high score and narrow spread, satisfaction was tested against all other variables that might influence it—part of Beachfront, time on Beachfront, household income, tenure, floor number, indoor density, management score, even moving plans and whether the flat was considered home—and no correlations emerged across the dataset at all. Research on housing satisfaction, particularly with elderly residents, mentions 'cognitive dissonance', the tendency to report that one is happy because it's easier to convince oneself of this than to change one's living situation, but only three or four times did I get the sense an interviewee might have inflated their score. On the contrary, two people responded with "20/10!" and more than a handful, "11/10". Others asked "Are you sure there's nothing higher than 10?" and those who responded with 9/10 almost always qualified it either with "If it wasn't for (…) it would be 10", or "Just because nothing's ever perfect".



Here, I must mention another factor that is shown to be closely linked to residential satisfaction: one's choice of housing form and location (Gifford 2007; Evans *et al.* 2003). Except for one social housing beneficiary, one DUT employee, and a handful of

adult dependents, all those interviewed for this study had chosen to live on the Beachfront. This is one dimension of the self-selection bias identified in Chapter 5. That the dataset does not include high numbers of households for whom housing was assigned, or those economically excluded from the area, or those who left the Beachfront or would not seek to live here in the first place for whatever reason, surely contributes to the high satisfaction levels recorded. As such, disproportionate attention is paid to reports of discontent, dysfunction, and material absences at all scales, in the hope of equipping the model Verticolapa to be as all-inclusive as possible.

To understand more about satisfaction in this context, it is useful to hear from those who were *less* satisfied. These eight individuals had little in common and lived in different buildings across the study area. In every case, there was at least one other interviewee in the building who was highly satisfied. Reasons for dissatisfaction, while intrinsically linked to personality and perception, were typically external, relating to the unit, building or neighbourhood. Similar complaints, for example about noise, broken lifts, or vagrancy, were raised all over the Beachfront, and will be examined in detail later.

A look now at those who were underwhelmed with their living situation introduces some of the less pleasant aspects of urban high-rise living.

Two respondents rated their satisfaction 6/10.

Charles (40) had stayed in North Beach for 11 years, nine of those in a 1.5-bed flat owned by his parents. They lived in Outer West Durban in a house which he called home despite not growing up there, because of "the nature and solitude". He appreciated the convenience of the Beachfront (walking distance to work) and felt connected with the neighbourhood, but I sensed he felt unsettled here. He mentioned that he was on medication, which meant he couldn't drive a car or own a firearm—both things he wished to do. The well-built fitness fanatic said he no longer felt safe walking at night, and would catch lifts or rideshare. He lamented the urban decay in the area and reported a host of odd occurrences, one of which was hearing gunshots two or three times a day. Whether or not his claims were accurate, I could see where each had come from and could imagine his frustration at not having complete control of his movements or safety.

Charlotte (26) was happy with her neighbourhood and Bencorrum, where she'd lived with her owner-occupier parents before moving away to start her own family. She had moved back 18 months earlier, this time into a rented bachelor in the 22-storey Towers, close to her husband's work and Addington Primary where her son (6) attended school.

Charlotte's main issue was the condition of the flat, which had previously stood vacant for years. The owner had handed it to letting agents, who raised the rent and were unresponsive and incompetent: the carpets were filthy, pipes leaking and taps broken, and they'd removed the security gate and never replaced it, causing safety concerns. The other issue was space, which was inadequate for the privacy needs of a growing family, and there was nowhere to spill out. Charlotte's son played in the open passages, risking a R200 fine, so she was grateful for tolerant neighbours. "If I could change one thing," she said "I'd wish for a facility for children, a place to play soccer and just run around. [T]here are a lot of children in this building [ ], they come home from school and are trapped in the house—on the TV, social media—so they've nowhere to grow up and play outside." Charlotte said she'd like to move to a bigger flat in Newlands, or a house with a garden. Asked whether the flat was home, she replied, "Yes. If you say it's a house, you won't be happy, you have to *make* it your home".



Fig. 92: Bencorrum Main Building, flanked by Crown Point (left) and San Francisco (right), with Towers visible behind it.

Five respondents scored their satisfaction 5/10.

Serina (23) had moved to a rented 5th floor 2-bed flat in Old North Beach a year earlier with her mother and brother. Previously, they had lived in a 4-bed house with a garden in West Ham, Phoenix, but no longer felt safe there.

> "Crime in the area spiked. People knew my mother was a single mum with decent earnings, [ ] we knew we were a target and people were getting robbed left, right and centre, so we decided to move into a flat. I preferred a [high-rise] building because of safety, it's better, people can't get past security to come in and rob or fight with you. In a house, they just jump over the fence and then your whole family is dead! Our family thought we were crazy to rent out our huge house and move to such a small flat. We looked around, closer to my brother's college

(Morningside) and mom's work (La Lucia), then this came up. Here I feel very safe. The gate is always locked but the door stays open at night for air… because we can! We even took the burglar guards off the sea-facing windows as they blocked the view. The lack of fear is so nice. In Phoenix we were calling ADT [armed response] all night as there were people in our yard. There are many more beggars wandering around our old neighbourhood now. Since the squatters increased, crime increased. You can't even go to the centre after dark anymore, you *will* get robbed. When we were moving out, a friend came to visit and as she jumped out of her Uber, a *para* bit her on the hand and robbed her. This was in June/July last year and it happened that someone broke into our house for the first time the following week."
~ Serina, Marine Sands

Suburban home invasions were often cited as a reason for moving to the Beachfront. In this case, the high-rise was a safe last resort that required substantial sacrifice: Serina and her mum shared a bed. They'd had to get rid of many personal items and put others in storage. Their car, parked on the street, had several times had its wipers and hubcaps stolen. They had to put up with night noise from sex workers and Joe Kool's nightclub across the way, not to mention constant harassment, even intimidation, from beggars. Serina worried a lot about personal attack, particularly hijacking.

This aside, she appreciated the privacy, anonymity and freedom of flat living. "It is home because I live here. I adapt quickly and can move on quickly." Glued to the media and always on the lookout for something better, she suspected Gateway New Town to be the only safe area left in Durban. She'd found a 2-bed unit within budget, a bit smaller with secure parking, on the 15th floor. "Too high!" she said. Serina was afraid of heights.

Jeff (54) and **Violet** (66) both arrived at a score of 5/10 by averaging out ten and zero.

Jeff, an avid surfer who had lived in Maldonado for 10 years, scored his daytime satisfaction 10 and his night-time satisfaction zero. His well-run block on the South Beach frontline stands opposite a large surface parking lot which was constructed for the WC2010 upgrade and had become the bane of his existence. From his flat, he could see public drinking, informal car washing and littering, but the main issue was noise: music blaring from parked vehicles, people shouting, laughing, fighting and getting mugged, cars being broken into, and revving engines—long a feature of Durban's 'boy racer' culture. This went on every night, worsening during holidays, and around 3am, rubbish trucks would arrive to clean up in an explosion of breaking glass.

"I was still renting in the building back then, so I didn't object [to the construction], and they flattened the park and put up a huge parking lot linked all the way from Belmont down to Afro's. Then came the drinkers, then the taxis, then school taxis etc. It's very stressful, it couldn't get any worse. It's even putting strain on our relationship: my partner has wanted to leave this place for two years now. You can't have the windows open after 4.30pm on any night of the week, it's too loud to watch TV… it's terrible."
~ Jeff, Maldonado

Most frustrating for Jeff was the inability of the Metro Police and South Beach UIP to "enforce the nuisance bylaws". If things didn't improve, he said he'd consider selling up and emigrating to Australia's Gold Coast which was "just like Durban in the '70s and '80s—the same lifestyle without the lawlessness".

Notably, a retired couple two floors below mentioned the parking lot, but their favourite thing about the building was "the safety and peace", and they rated their satisfaction 10/10.

Violet, who had lived on the Beachfront most of her life, was 100% satisfied inside her 1.5-bed flat on the 20th floor of Mangrove Beach Centre (MBC) in North Beach, but gave a zero to everything outside it.

The residential slab sits atop a commercial podium which, Violet explained, was previously quite upmarket, with banks and boutiques, but gradually such businesses moved out, leaving a large SPAR supermarket, the only bottle store in North Beach, a KFC, two dive bars, some small shops and takeaways, and three hair salons, one of which belonged to her.

The substance-addled vagrants hanging around the grimy centre begging and attempting to park cars had scared away many of her customers, and the building's declining management had damaged it further. Aside from its immediate environs, MBC's biggest issue was the elevators: of the three lifts servicing over 220 flats, it was unusual to find more than one working. On a good day it would take Violet 10 to 15 minutes to get home, but on a bad day, up to an hour. "Seriously,"' she said, "it takes me longer to get from work [1st floor] to home [20th floor] than it does to drive to my sister in Glenwood!"

Violet chatted on about illegal building work, unscrupulous landlords, disinterested security, blocked plumbing, and the theft of petrol from their car in the basement. Yet up here, gazing out from the original-condition bohemian décor flat, it was easy to forget all that. My subject claimed to fear nothing except houses. "I would never consider living below the 10th floor!" Only one thing worried her: "In this building, I worry I'm not going to get my money back when I sell. Things are getting so bad I don't know whether I should sell next month or wait a year. [ ] I think about it all the time lately. People don't have money, the cost

of living's going up and up, we're swapping one crook for the next… that's a concern."

Violet's British passport made it easy for her to leave the country, but she said she would never leave her children. I suspected she would struggle to live away from the Beachfront, too.



Fig. 93: The view over Carpendale Park from MBC's 20th floor

Rajni (72) had a similar tale of a "strong, beautiful landmark building" that had deteriorated over the years until it became almost unliveable. Having grown up in an extended family on a North Coast sugar farm, she'd moved to town and bought a bachelor in Rydal Mount 26 years previously as she "wanted a change, something different" and was "seeking the beach and high-rise living".

> "I was the first Indian in the block, they were all White people and kept to themselves. In those days I was Hindu (now I'm Christian) and I used to bake and take around trays of sweetmeats for festivities. That's how they got used to me and we became close—they were mainly old people, and at that time I was young and full of life."
> ~ Rajni, Rydal Mount

Rajni became a trustee, and later the Chair—"I got to know the building through my time as a trustee, it was my responsibility, I feel attached to it"—but faced an uphill battle. Over the years, most owner-occupiers passed on, moved away or sold up. One of these was the supervisor at time of study, who told me she had raised her kids in Rydal Mount but moved out when they were teenagers, as it was no longer a suitable environment. One absent owner, a trustee from Johannesburg, had reportedly run his five units as holiday lets for years despite this not being allowed, which had caused endless problems. Originally, Rajni explained, there were 172 flats in the building, until another owner built more units illegally in the parking lot [1st and 2nd floors] around 2005. "We couldn't get it fixed, the papers disappeared. She's slippery, I think she bribed the inspectors or the Council".

The Art Deco ex-hotel (circa 1948) is bounded by the narrowest part of Gillespie St on its entrance side, and a grimy alley on the other. Koko's, the ground-floor nightclub and centre of the local drug trade, is reportedly run by Nigerians who live upstairs.

> "When I was the Chair, the police were always here. Every flat was infested with drug-dealers, there were constantly people coming and going twenty-four hours, both selling and taking drugs... and giving them to kids! I once saw a White teenager completely zonked out in one of these flats. The police were involved—the dealers weren't scared, they said they paid a 'tax'… so corrupt. At that time I was fearless, I took them on and it did get better. But now I don't get involved."
> ~ Rajni, Rydal Mount

After suffering a stroke in 2010, Rajni stepped down. The building I visited had substantially recovered. In recent years, Rydal Mount had received a paint job, a new lift, and a security upgrade with CCTV and an access system. There had also been neighbourhood improvements before the World Cup, but these did not last and Rajni was mugged thrice near her home. "Now I don't go out at night," she said. "They sleep late so I go out early, do my shopping at Checkers and am back by 2pm. It was always jewellery they stole (a gold chain; a diamond engagement ring) and the police do nothing. But now, nobody comes near me, the street kids protect me and I don't wear jewellery anymore." This was not the first I heard of informal street protection networks in South Beach, where the most vulnerable street-dwellers (boys) teamed up with vulnerable flat-dwellers (women with children; the elderly) to escort them, carry parcels or run errands in exchange for food or money.



Fig. 94: Rydal Mount's ground-floor entrances (left to right): Parking, Koko's nightclub, reception, hair salon and minimart.

Despite her troubles, Rajni displayed no animosity towards her new neighbours, particularly the foreign Africans. "Even the drug dealers", she said, were very respectful, "even more so than locals". Although there was no longer anyone on the block to help her, she willingly helped others. "People are so different from me," she said, listing examples: a Coloured single mum, a Nigerian pastor and his family, and an old White lady. "But they will come to me, or if there's a new owner, I'll cook them something to say welcome to the building. The foreign Africans hesitate to take food from strangers, as it could be poisoned—they won't take from anyone but me," she smiled.

Though happy at Rydal Mount, Rajni had decided it was time to sell her flat. She was tired of the "hectic pace" of city life and was looking forward to moving into her Italian fiancé's Morningside house and having a garden "both to look out onto and use".

The last respondent to score their satisfaction 5/10 was **Thandeka** (53), who'd moved into Hawaii 16 years earlier.

The State-subsidised rental housing, run by First Metro Housing (FMH), comprises three renovated blocks fronting Rutherford Street in South Beach—two conjoined (east and central, nine storeys) and the third (west, ten storeys) separated by a vacant plot. Until a decade earlier, Thandeka had been very happy in the 1-bed flat with her husband and two daughters. She loved their proximity to Addington Primary, the hospital, promenade, beach and uShaka, and had known all her neighbours. When things began to decline, the resident population changed. The flat itself was in decent condition, with a lovely harbour view, but that is where it ended. For a long time, only one of the building's four lifts had worked, and Thandeka wouldn't use it as she'd been stuck so many times. I heard about leaking pipes, impossibly high electricity bills, and a building that was once a safe and peaceful place to live but was now neither.

"Now it's quiet," she said, "but if you come after 6pm you will see, it's chaos! Anyone walks in—strangers, a group of four men. [ ] Tenants can let anybody in or give friends a disc. I'm surprised they checked you! I always used to challenge them, but I'm tired of fighting. You should see the students who come here at night, they like to drink and smoke *dagga*."

A while back, residents had caught two female *paras* coming in to the flat of a Nigerian man to get drugs to sell, and discovered he was housing trafficked Asian sex workers. "Management knew," she said, "but were friendly with him. He was only evicted after some pressure, and I think then only because he didn't pay rent."

Thandeka's close friends and support network in the block were no longer.

"Before, we had a residents' committee of five local ladies, but it didn't succeed. [ ] FMH shut [us] down because we complained and were asking too many questions, and they didn't like it. Now there is no-one to place grievances with. When we came here it was beautiful and clean, now you can see what it's like. [ ] There are so many foreigners staying here, singles and families, and they aren't working. For South Africans, lots of documentation (e.g. payslips) is required and if we get in arrears, they kick us out and replace us with foreigners. [ ] These people are destroying our country and there's nothing we can do. When we raise the issue they wrongly call it xenophobia, but South Africans need housing. Locals struggle to afford the R10K deposit, but the foreigners can pay R15K or R20K up front to secure a flat, and on-site people share the extra between them. [ ] Some lessees even move out and rent their flat to students, and there are no checks on who or how many live there. [ ] Us South Africans here for 10 years or more, especially Indians, know each other. In a community you must know your neighbour, their name, who they are. We try to greet the foreigners, but they don't acknowledge you. My new neighbours are very nice, but I can only speak to the kids. Here there are Ethiopians, Somalians, turnover is really high and I feel they could kick me out anytime."
~ Thandeka, Hawaii



Fig. 95: View Southwest over the back of Hawaii Central (front left) and West (middle right), straddling an empty plot.

Thandeka had watched the surrounds deteriorate alongside the building. The increase in noise, vagrancy and crime contributed to her reduced satisfaction, and she was irked by the perceived idleness of newcomers, especially the men loitering on the street, harassing her daughters.

"We see *paras* fighting outside, throwing rocks, and the police just watch. This place has really changed. It's difficult for us because we know how it was before and we've seen things getting destroyed," she said sadly.

I'd heard interviewees complain about "the foreigners" in their South Beach buildings, but in the social housing block it became clear how less affluent locals might feel about their influx, perceiving newcomers as a threat to their way of life and unfair competitors in a race for limited resources. Also clear is the spatial injustice manifest in this situation, highlighting issues with clustering urban populations according to SES. Encouragingly, there was an understanding that it was seldom the individuals seeking housing who were to blame, but the greed and corruption of those with power.

Caroline (29), a Muslim mother-of-three, had lived in North Beach since marrying her Pakistani husband who ran a local barber shop. The young family had rented in several different buildings, and at time of interview lived in a 2-bed unit in 26-storey Connemara. A shy person who'd grown up in a rural area, Caroline had adapted to what she called a "lively" neighbourhood, but an increase in crime and delinquent local youth, coupled with problems in their new block, meant she rated her satisfaction 1/10.

Asked what she would change, the young lady exclaimed: "Everything!" The flat was a good size and in decent condition, with tiled floors, and although she liked antiques, Caroline said the furniture had to be "simple and unfussy" because of her kids. "They draw on the walls, so we need to repaint every six months. They destroyed the laminated cupboards and smashed the fish tank." She seemed exhausted at her inability to improve her own space, and reported constant drilling and banging from renovations in the block, and "little" things like a patchy DSTV connection and very thin party walls. Thankfully, they hadn't been too badly affected by recent lift problems ("We didn't have a lift for like four months!") as they lived lower down.

Things were "on the up", however, and the new supervisor was doing a good job. He had got one lift running, marked the parking bays, put up lights, and had a new name sign made for the building. But he'd not managed to address Caroline's worst issue with the flat: the cockroaches. "It's not everywhere, it's just this building," she said. "It's bad, the worst thing ever. [ ] With kids it's unhygienic. We've called an exterminator, we've tried everything, but it's just a waste of money." The other thing that bothered her greatly was neighbours' attitudes to her children.

> "I had no choice but to move here. We were in Key West, I was pregnant, and we were going to buy there but it didn't work out and we had to move in a hurry. [ ] I feel now like the kids are caged up, they have no freedom. The flat is not a good place for them as they have nowhere to play and they're not even allowed to run around *inside*. We have this man downstairs who complains 24/7. [ ] Once, we were having a kids' birthday party and he came up and went mental in front of all our friends… so rude and disrespectful. I wrote to the Body Corporate and they took care of it. He hasn't come up since, but now he sends security. The old lady next door-but-one is even worse, the moment the gate opens she's out: *'Why do you walk so loudly in the corridor?'* My eldest son (9) is sociable and loves to talk, so when he's home, everybody knows. Next door has four kids, and when we all get together, she'll call security and they'll come up to tell us, *'You can't play in here, you must go to the park'*. The previous supervisor used to send us written warnings with neighbour complaints. If you can't play in your own flat, what am I paying for? People with kids would understand."
> ~ Caroline, Connemara



Fig. 96: Connemara (centre) seen from Snell Parade, framed by (left to right) Dunelands, Exeter Hall, Tugela & Wendover.

I asked to hear more about the neighbours.

"They're both Indians in their 60s/70s. There are a few old Whites in the building but I've had no problems with them. Generally though, they are nosy people here and I'm not used to it, growing up in an isolated place and now coming to all these people who are in your face all the time. [ ] I like to be by myself, I wouldn't want someone coming over unannounced. Indians are like that, if you invite them over once they'll keep coming… honestly, I'm not a big fan."

Caroline's other neighbours, a foreign African family, were reportedly very noisy at night. Most active from 9pm to 1am, they spoke loudly, had rowdy parties and weekend visitors, and left their door ajar so

unpleasant cooking smells and smoke ("dagga? hookah?") wafted into Caroline's flat.

We spoke about the recent hike in muggings and the errant behaviour (drugs, sexual activity) of local youth who frequented the park. "I can see them from my window,"' she said. "I believe it's how you raise your kids, the time you spend with them. If you don't give them attention, they will seek it elsewhere." It didn't seem like the situation was rectifiable by just moving flats. Perhaps what this family needed, I thought, was a house with a garden in a quiet, safe suburb or small town, but wondered whether such a place even exists in today's South Africa. I was unsurprised to hear the family were looking to emigrate in the coming years.

Time on the Beachfront

Interviewees were evenly spread across the four categories for 'Time lived on the Beachfront'. Most popular by a small margin was the '11-20 years' category at 30%, representing those who moved to the area between 1998 and 2007. Those who'd lived on the Beachfront for more than 20 years were next (just over a quarter of respondents), followed by '1-4 years' (just under a quarter). The smallest group, a little under 20% of the sample, had lived in the area for 4-11 years.

The longest continuous Beachfront resident I met had lived in the same building for 53 years, and the same flat for 51 of those.

Vanjie (76) had first visited Northlyn shortly after the 18-storey building was completed in 1964, "when the plaster was still drying on the walls". The hairdresser went there to do hair for a wedding and really liked the building, so shortly afterwards, moved into a 1-bed rental unit for which she paid R80 a month. A few years later she bought the 2-bed corner flat next door, and had lived there ever since.

Having immigrated when very young and never married, Vanjie had no family in the country but had found a happy home here, at least until 1994. As the world changed around her, her life seemed to separate into polarities: day/night, in/out, me/them. Her immaculate flat had white floor tiles and was "sunny, comfortable, clean and green", with many plants and scented flowers. Yet the windows, I was told, were never opened, except when it rained or sometimes between 3am and 7am before the air became laden with car fumes and grease from the takeaways in MBC. The whole world outside, said Vanjie, was just filthy: "Now when I get home, I feel the need to take off my clothes and wash off the dirt." Her windows were sparkling on the inside but caked with layers of grime on the outside.

> "Nobody comes in here at all, not even to clean the windows. I've had things stolen in the past, as well as a sexual harassment issue. They [maintenance] know if they come into my flat I will charge them for breaking and entering. We have an understanding. I don't have servants; nobody even knows what this flat looks like inside. That's why it's the only flat in the building that's never been broken into. [ ] Before independence we were like a family, if you went away you could ask someone to water your plants. There was no crime, no snooping or grabbing. Afterwards, that stopped completely."
> ~ Vanjie, Northlyn

The senior, who rode a bicycle everywhere, was active during the day, but home by 4pm each afternoon. She had been heavily involved with law enforcement—reporting errant taxis (for illegal stopping, hooting, public urination), dumping and bin-digging, and even patrolling public spaces for drug peddlers—but received so much verbal abuse she gave it up, and concentrated on gentler charity activities. Vanjie was also embroiled in an ongoing legal battle with the Body Corporate and agents over something petty, which had caused severe health issues and weighed heavily on her mind.

I winced often in the interview, struggling to reconcile the bubbly Christian seated before me with stories of endless conflict and her frequent, adamant references to the undesirable qualities of the 'Blacks', 'Muslims' and the 'vagrants'—a term she'd co-opted to mean anyone she considered uncivilised or uncouth.

Her satisfaction score of 9/10 was unexpected. "All I'm missing is my life's companion, where is he?" she said a little sadly. With no concrete plans to move, Vanjie admitted she had been feeling unsettled lately, that perhaps the time was drawing near, and that she wished to one day "live in the States, where there are kinder people".

Moving Plans

A little under half of interviewees had no plans to leave the Beachfront. Had I not created a separate category for 'Only if Necessary' this figure would have been over 60%. Many respondents planned to stay here for the rest of their lives, so their answer was a cheerful euphemism for "until I die". The more pragmatic (usually) single sexagenarians and septuagenarians accounted for most of the 'Only if Necessary' group, acknowledging that although they would love to die here, a time would probably come when they would need care and have to move in with family or into a home. Those who would go to family cited the UK, US, Australia, and Johannesburg as their locations—none in Durban. Two couples said they would move locally if need be, one to a caravan park in Margate and the other to Beth Shalom Retirement Home on the Berea.

Move	Time on Beachfront: 1-4 Yrs	4-11 Yrs	11-20 Yrs	20+ Yrs	Total
No plans	7	12	15	14	**48**
Only if necessary	2	5	2	6	**15**
Coming months	8	1	3	2	**14**
Coming years	4	1	9	4	**18**
Always looking	3	0	1	2	**6**
Total	**24**	**19**	**30**	**28**	**101**

Seefeld (68) had lived in his 1-bed unit in the annexe atop the parking lot of Yarningdale for 27 years. Calling himself "the Mayor of the Squatters at the Back", he enjoyed a suburban outlook over Victoria Park up at the Berea. The retired educator was in good health, but was realistic about the limitations of old age. Seefeld had already looked at a Beachfront retirement home within budget, but "it wasn't my scene, it's too dense; they're all on top of each other, there's no space… I wouldn't even fit my bookcase in those rooms!" If he had to move, he'd consider a care complex or granny flat, "maybe up north, as there seems to be a move up that way" but was adamant it would need to be "as well-connected as the Beachfront"—not an easy criterion.

Connie (64) owned a bachelor flat in Ocean Way, a small block accessed from the Crieff Place *cul-de-sac* in southern South Beach. She had lived on the Beachfront for 40 consecutive years. Her friends all stayed in nearby TAFTA facilities and her aunt, her only relative in town, in a TAFTA home in Morningside. If she had to move, Cathy said she would apply for TAFTA's conjoined buildings in nearby Prince St, and would prefer old John Conradie House (conversion) to the recently-built Langeler Towers, as she'd heard the walls between rooms were very thin.

Of the others in the 'Only if Necessary' group, one was a dependent and two had special rental arrangements—with family, and a Johannesburg-based friend—so their tenure was not secure.

Neli (40), the Baltimore res advisor, loved living there with her husband and son ("11/10!") and the bonds she had formed with students, but was realistic that the flat was tied to her job, and anything could happen.

Just under a third of the sample planned to move out in the coming months or years. As mentioned, no correlation was found with satisfaction, and most movers cited a natural progression as their main reason. Many expressed sadness, saying they would miss the Beachfront or be back often. Five of the 32 movers fell outside the 20-59 age range. Two were students, one of whom planned to move to a commune in Glenwood. The other three were pensioners, two of whom planned to move into granny flats in their sons' family homes, one in Everton and the other in Cape Town. Eleven cited changing space needs as a factor. Either they were engaged or recently married and planned to start a family, had or were expecting a baby, or had raised a family here and had outgrown their flat. Most were destined for a flat or house they had bought or planned to buy in the inner suburbs (Glenwood, Musgrave or Morningside), while a few were looking further afield.

Riley (45) fell into this category. A "modern Muslim", he and his wife had lived in their 2.5-bed flat in Courtleigh Heights for 18 years. They had four children, one each in university, high school and primary school, and a two-year-old. Although the eldest lived in Cape Town, five people in the unit meant they were technically overcrowding, as the limit was four. However, as established owners who actively contributed to the community, this had been overlooked. Even if a scarce 3-bed unit did become available, the family were unlikely to be able to afford to buy it. Riley loved everything about the Beachfront—the diversity, activities, sea and nature, sense of community and convenience—but was saddened by the environmental deterioration (urban and natural) he had witnessed in recent years. The flat's ground-floor position on the corner meant they were exposed to things that didn't affect others: beggars at their windows at all times of day; wild monkeys; rodents; bird lice and droppings from pigeons nesting on the ledges above; noise and smells from passing traffic and from the next-door hotel's service entrance and café. Not even the old building's failing infrastructure (lifts and water reticulation) and associated extra levies, or the fact that their second car had been broken into thrice and tampered with many more, was enough to chase Riley away. It was only because the lack of space was putting strain on familial relations that they were considering a change.

In the same building, **Rosco**'s (35) two sons were still young, so the family had more than enough space in their rented 2.5-bed flat. They loved the Beachfront because it suited their sporty lifestyle, and scored 10/10 for satisfaction. Rosco mentioned two possible reasons they would consider leaving, the first of which was school catchment areas. His firstborn had just been accepted into Durban Prep (DPHS) in Morningside, but they would consider moving to Durban North to be eligible for their choice of good public high schools. The second reason was uncertainty about the country's political and economic future.

> "My biggest concern at the moment is governance in the country. My kids need a future, so it's linked indirectly to our living situation. Me personally, I will be monitoring the situation closely over the next five years. One of the reasons we've not yet purchased is we want to see where the stability is coming from… if we need to go, we will leave the country. I've been toying with that idea for a while. I know what I

needed to make a success of myself, and if my boys don't have that I won't be helping them to fulfil their potential."
~ Rosco, Courtleigh Heights

Six respondents planned to move out in the coming months, either because they had bought a flat in the inner suburbs or were moving in with a partner. A further six, all but one in their late 40s or 50s, planned to move away in the coming years as retirement from work or the pace of city life. Four of these were Black South Africans who planned to move back to rural or peri-urban areas, to family homes or new houses they would build or were building. In both young Muslim families with firm plans to emigrate, the husbands had been born outside the country, so connection to local soil was maybe not as strong.

At time of interview, **Albert** (47) was readying to move out of the rented 2-bed he shared with his wife and three young children in Capella, South Beach, as their landlord had given them notice. The immediate plan was to move to another flat in town, convenient to Albert's work as a retail manager in North Beach, but as soon as he could afford a car, they would like to move to a house with a garden in the inner suburbs.

Ambitious **Kalenga** (28) did freelance photography in addition to his job as a security guard in Courtleigh Heights. With little means and lots of creativity, he'd turned a bare room in the staff quarters into a comfortable space, and was striving to better his situation. "Life can change in a click, and I don't like to be stagnant," he said. "This is beautiful for now but it's not what I want forever. If I had to move on/up, it would be to live in North Beach or Umhlanga, but as a normal person, as a tenant and not as security."

Coincidentally, Albert and Kalenga had both come to Durban from the DRC in the last ten years.



Fig. 97: Kalenga's stylish bachelor pad in the staff quarters.

Abdullah (52) was planning to move flat, but stay on the Beachfront. After living in a 3-bed unit in Marine Towers, North Beach, for 18 years, he and his wife decided to downsize, as their son was living abroad and they both travelled a lot. They had purchased a bachelor flat in neighbouring Floradoone about a year earlier and renovated it to high spec, only to discover it was too small for their needs: a single open-plan space did not permit activities like sleeping and watching TV to happen simultaneously. The flat had been on the market for a while, leading Abdullah to worry he may have overcapitalised, and the couple were looking out for a 1-bed in the area.

Another mover, **Zaahir** (40), was an owner-occupier in Marine Towers at time of interview. The family had lived there for 15 years, but most of their friends, parents of similar age who they'd met through North Beach Islamic Pre-School, had moved away, leaving them with a sense of loss. Zaahir had been lucky to secure a flat with three bedrooms, the minimum size as they had a boy and a girl and their culture frowned upon different genders sharing. The family had failed to bond with the new wave of residents who were "a bit riff-raffy". Moreover, they had recently had several run-ins with building management, which had left a bitter taste and confirmed their instinct it was time to move on. Zaahir was concerned about urban decay in the area, and the crime. "One of our primary reasons for moving here was because the area was maintained, it was secure and safe. [ ] We thought the park would be accessible, the kids would be fine to run over to Pick n Pay without being harassed, but obviously the dynamic has changed with the influx of beggars and vagrants," he explained. They hadn't ruled out staying in North Beach if they could find a suitable flat, but Zaahir was clear they would not remain in Marine Towers.

Six individuals were captured as 'Always Looking', two of whom we have already met.

Businesswoman **Zama** (46) lived in her 2.5-bed flat in Carillon, owned another on the Point, and had enjoyed her 17 years on the Beachfront, but very much wanted a house with a garden. **Mpumi** (55), a "loving, fun, crazy-mad human" had bought her bachelor flat in Rydal Mount, located in the busiest part of South Beach Central, 22 years earlier while working for provincial government, and paid it off. In a nasty twist of fate she lost her job, and in June 2016 was evicted for falling behind on her levies, which were unusually high at R2200/month. Mpumi lived on the streets of South Beach for 18 months. She tried hard to get a job, but age was against her, and even did a stint as a cleaner in a "disgusting lodge" for seven days a week for under R1000/month. Thankfully, she made a deal with management whereby she could move back into her flat and share with three others to make up the levies. This worked for a while,

but when I met Mpumi she was frantic, as all three young ladies had left without notice, leaving her hustling to find flatmates and in constant fear of the repo man. Now there was very little keeping her at Rydal Mount, as the strong sense of community she'd felt there was gone: "It was like one big family! Zulus, Boers, English… they used to come and visit my flat, it was always full of kids, open doors, like a township. I miss those times." Mpumi loved independent city living and the beach, but was accepting that this lifestyle may not be sustainable. "I'd like to move, there's so much pain and worry about my financial situation, but I remain hopeful."



Fig. 98: Looking down busy Pixley Ka Seme St at the sea; The visible high-rises are (right to left): Seaboard, Coastlands Hotel, Olympic Court, Ottawa Court and Belmont.

Lawyer **Ali** (44) had lived more than half his life in the same North Beach block and said his brother was the first Indian person to buy into Shorelands in 1993. Twelve years earlier, Ali had bought a sought-after 2-bed corner unit and renovated it, flipping the lounge and main bedroom and open-planning the kitchen so the living areas got north sun and partial sea views. The stylish flat seemed perfect for him, his wife and son and he loved living here, but spoke sadly of the slow creep of urban decay. For a while now, he said, North Beach had failed to attract new residents, or at least the 'calibre' of people it previously did.

"I do feel safer living here than in a suburban house, but there's a stigma, people look at me as if to say 'You haven't progressed in life because you're still living on the Beachfront'. [ ] Sometimes I wonder why I bought in this area, no-one comes to visit us here. So I guess I feel a bit trapped, like inertia… maybe I'm spoiled by convenience," he smiled. Ali clearly felt pressure to move 'up' to what his social circles considered a better house form or area, but this conflicted with his own positive experience of 'home', rated 8/10. "This style of living, so close to the beach and with this quality of life, couldn't be afforded anywhere else in the world. It really is unique. [ ] I'm always looking, but prices elsewhere are prohibitive. Ideal would be a house in Musgrave or Durban North."

The last to be "always looking" was MUT student **Vukani** (21). He officially lived in a 1.5-bed Ottawa Court flat with his mom and aunt, but his bed was a "sponge" [mattress] that was packed away in the day, and he spent up to five nights a week at his twin brother's flatshare in nearby Seaboard. MUT had recently taken over the lease for the large ex-hotel Lonsdale Residence across the intersection from Ottawa Court, so Vukani could make use of the free campus shuttles while he waited for a place in res to open up. He was very happy in the area, so a bed in the Lonsdale, he confirmed, would be perfect. The brothers were grateful for their mom's spacious flat because it offered a "quiet, peaceful place to study".

Missing Populations

In the last few months of fieldwork, I began specifically targeting groups which I knew had a presence on the Beachfront, but had not yet managed to interview. One of these was the Chinese community centred around MBC, which has a Chinese restaurant, grocer and school on the first floor. Some families lived in the flats upstairs and others were scattered around the area. Most supervisors in North Beach reported at least one Chinese family living in the building, but most times, there was doubt as to whether their English would suffice for an interview. This was confirmed when my attempt to approach one of the adults was met with much confusion and awkwardness. I was excited when a lady in Willsborough Mansions offered to introduce me to her neighbour and friend, an older single Chinese lady who spoke decent English, but something came up last minute and she had to travel back to China.

The Beachfront also has a significant and growing Pakistani community residing mostly in the Muslim-majority northern half of the study area. Many of the shops and takeaways in North Beach are Pakistani-owned, and the aroma of *tandoor* ovens firing up each morning is unmistakable. All the resident Beachfront Pakistanis I have met and heard about are men. Most are here to work, and many reportedly live in crowded conditions in flats rented or owned by their bosses, although this was impossible to verify without seeing it for myself. I approached a middle-aged man who owned a takeaway and a shop in MBC. He lived in Umhlanga but owned multiple flats in the area, at least two in Key West and two in the block upstairs, where his sons and workers stayed. He was open to me interviewing one of them, but after returning a few times I was told he had "gotten" a new baby and returned to Pakistan for three months.

The high number and diversity of foreign Africans residing on the Beachfront, I believe, was not done justice by this study, mainly due to the absence of participants from three countries: Ethiopia, Somalia and Nigeria. The first two were what I came to call 'invisible populations' as I knew they were there but hardly ever saw them. This I found strange as, unlike the Pakistanis, they reportedly tended to live in large family clusters with their wives and numerous children. And unlike the Pakistani men, who were very visible—on the streets, walking on the promenade or to and from Mosque, going about their daily business—I had never once seen anyone who looked even vaguely Ethiopian or Somali, man, woman *or* child, coming and going from a block of flats.

One North Beach building supervisor informed me that at least ten flats in the block were occupied by Ethiopian families, but that I had no chance of pinning them down for an interview as the adults who spoke sufficient English "worked all the time", leaving very early in the morning and returning late at night. He seemed mildly disapproving of them, remarking that they had "so many children in there", received many visitors and were quite noisy. If he suspected overcrowding, it was probably not pursued as they did not disturb other residents.

Another, smaller building in South Beach Central reportedly had its whole sixth floor occupied by Somali families. Some of the men ran shops nearby, and sure enough, both Ethiopian and Somali men were markedly more visible in this vicinity, but there was still no sign of the women and children. Yet in high-rise buildings all up and down the Beachfront, I heard of neighbours who burned unfamiliar incense in open burners by the ajar entrance door, and of a strong, acrid odour like burnt coffee coming from the same flats. I didn't experience this first hand, but it is very likely that the source of these smells was frankincense or myrrh being burned for religious or other purposes, and coffee either being roasted or brewed for the Ethiopian coffee ceremony, or fried as is popular in Somalia. When residents had met neighbours from either of these countries, they said they seemed pleasant enough, but that they kept to themselves.

In this study, Nigerians might be considered the 'disenfranchised population'. They were only encountered in South Beach, and at scoping stage some supervisors said openly their building did not welcome Nigerians. One exception was a small Tropical Modern block near China Mall that had a relatively large Nigerian population, about ten families in total. Next door is a dingy low-rise building, what looks like a 24-hour nightclub with blackened windows and young men hanging around outside. The savvy young building supervisor had grown up in the area, had family in the police, and was under no illusion as to the nature of activities going on around him, yet remarkably was able to separate his work duties and maintain a safe and pleasant environment in the block. He also concerned himself with the plight of tenants who were mistreated by landlords, as I witnessed sitting in his tiny office one morning.

A distressed Zimbabwean man came down to complain about the broken state of his flat and his inability to contact the landlord who was charging higher-than-market-rate rent, and the supervisor advised him on rights and procedures. This was not something I'd seen happen in other blocks, where absent owners appeared time and again to be afforded unspoken impunity. Sadly, I didn't manage to get an interview here.

I hoped to have more success in Rydal Mount, after a few positive encounters with young men in the lobby, but I never heard back. I mentioned one such gent to the supervisor, saying, "I wonder why, he seemed like such a nice guy."

She grinned at me, "He's great, isn't he? Don't take it personally, he probably just thought he'd found a new customer."

The middle-aged lady was perfectly aware of the activities taking place under her nose. Yet here, it appeared residents were treated equally regardless of nationality, occupation or any other markers, as long as they paid rent and overnight fees (R150/person) on time and didn't cause trouble.

I do not seek to undermine the challenges facing these two buildings in terms of resident liveability and management, but in a way, these blocks represent two of the most spatially just 'ecosystems' encountered here, in terms of equal accessibility to, and fair treatment of, a wide range of occupants.

The last population I believe was underrepresented, while they do not constitute a large proportion of Beachfront residents, is younger, working singles and couples with or without children. Among those I pursued, some for over nine months without success, were a medical doctor, an SABC journalist, a mother who worked and studied, and another who was married to a spearfisherman, had two small kids, and was a manager at Suncoast Casino. This group led very full lives with barely enough hours in the day for themselves, let alone to dedicate to me.

Conclusions

One aim of this research was to see how multiculturality might be assisted to self-replicate and flourish in the way spatial injustice is so prone to doing. This necessitated diving headfirst into the lives of the 101 participants. The antithesis of a *flâneur* who strolls along observing with indifference, the ethnographer's emic lens revealed layers of textured detail only hinted at in the stories shared here.

The word I used most often to describe the research experience was "fascinating". Perhaps, suggests van Leeuwen (2010), such fascination is only

made possible by mild indifference—to strangers, density, dissimilarity and sensory overload—but it is reassuring to confirm his belief that "the sense of wonder in the face of the sheer diversity of human life forms" never goes away. Even in a throng of anonymous strangers, humans do not lose our ability to single out someone or something we recognise as valuable (ibid.)

More revealing than empirical data, the qualitative data gathered about these individuals, particularly around identity, captured unique contemporary perspectives on modern South African life, shedding light on how ordinary people perceive one another and the spaces they inhabit. This provided an umbrella for discussions around race and religion, their importance (or not) to different people, and the relation between the two. Perhaps most enlightening were the satisfaction scores, not for their statistical merit but as indicators of where dysfunction lies within an otherwise well-functioning urban system.

The problem-based approach is similar to how architects and other designers typically work, and here again we find a link to diversity, which according to Moroni (2016), has been "recognised as a fundamental precondition for creativity". It is not, he explains, that diverse urban environments are the exclusive domain of creatives, but rather that such places face more numerous and complex problems, and so present varied opportunities to find solutions. Viewed in this way, dissatisfaction with the status quo becomes a positive, a motivator to fix or find better ways of doing things. The ideal platform for this is individual exchange, formal and informal, with others who have different skillsets and types of intelligence (ibid.)

In this chapter, I included as much quoted data as space permits, for readers to interpret for themselves. They may draw different conclusions, or find different ideas in certain words or phrases.

Together, four sections (Birthplace, Childhood house form, Time on Beachfront and Moving plans) describe the fourth dimension, situating each individual in a time continuum that helps to see the world through their eyes. At this depth of enquiry, it is near-impossible to pass judgement on anything—latent racism, buy-in to media propaganda or neighbourly intolerance—as everything is revealed to be situational, to come from somewhere. Similarly, it is important to acknowledge other experiences, viewpoints, and unheard stories. Writing about underrepresented and missing populations at first felt oddly unscientific, until I realised the significance of this self-selection bias in the sample. How might the research findings, and by implication the proposals for the model Verticolapa, be different if I had interviewed more young working professionals, more low-income families, or even one Chinese or Nigerian household? Not something that was within my control, there is nevertheless value in acknowledging this bias as it lets us speculate on the shape these coexisting 'silent' narratives might take and how they might counterpose or reaffirm those captured here.

From a different perspective, my 'exemplar' interviewee was someone else's nosy neighbour, the enforcer of rules that long ago ceased to make sense, or the culprit generating noise that made another's life unbearable. Viewed in this way, architecture generally, and the residential high-rise specifically, becomes an objective moderator not just of human relationships, but our experience of the city.

In the next chapter, you are invited into the private spaces occupied by the 101. An enquiry into the smallest spatial scale, that of the unit, begins by unpacking the meaning of home for these city-dwellers. Empirical data collected about each flat includes its size, occupants, indoor density, household income, tenure and cost, and these are analysed comparatively and fleshed out with qualitative data, typically vignettes illustrating both extremes, in an attempt to capture as much diversity as possible. Additional information on interiors, unit-level security and parking provision completes the picture.

Chapter 7:

My Home, My Castle

Findings – Unit/ 1

> "In both cases new building typologies need to be developed. In both cases there is a need to reflect on what 'housing', 'being private', and 'public space' means; what a dwelling is supposed to protect against and how; and how much place a person really needs."
> (Maak 2015: 19)

Here, Maak identifies the two current crises in housing: the containment of economically and environmentally unsustainable urban sprawl and desolation, and accommodating the influx of migrant workers to developing countries. The spatial injustice manifest in both situations is heightened by the vast qualitative chasm between them, so instead of two separate questions, I propose treating them as one overarching issue.

The question of how new housing forms might address all three branches of sustainability for all types of people simultaneously is, I posit, answerable in part through studying an existing working alternative that, as established in the previous chapter, currently delivers high levels of satisfaction for a broad range of users. A more intimate understanding of those who inhabit the residential high-rises of Durban Beachfront today has given us a lens through which to examine the next spatial level: that of the unit. What we will find is a variety of living spaces and arrangements as diverse as the personalities inhabiting them.

Home

In my youth, I was adamant a person can only have one home. Having moved several times, this was not contingent on a particular building but rather a wider geographic location—in this case, Durban. After undergraduate study I spent time travelling the world, and realised I'd been wrong all along. Home is not just a patch of ground or a structure of bricks and concrete but rather a feeling that can change, grow and occupy multiple spaces at once.

Nevertheless, I was surprised that nine out of ten people interviewed were able to call their flat home. We've already heard from respondents whose sense of belonging was not necessarily connected to how long they'd lived there or whether they owned or rented. Some were completely comfortable with the notion of having two homes, and others explicitly felt it important to their happiness to embrace wherever they were currently living.

Of the ten people who did not feel this way, four were foreign-born. Medical researcher **Magdalena** (35) grew up in a flat on a Paris housing estate. She had lived in three different places in her four years in Durban, two of which were close to her work in Glenwood. She found the experience nerve-wracking.

"I went into chronic anxiety living in South Africa—not immediately, but gradually. My first place, the granny flat, was burgled three times in a year… it was an inside job, I was being watched. I had really made it my home, but soon felt very unsafe there." Magda said she'd left Glenwood because she was bored and wanted to take better advantage of the sea. "This is secure and close to the beach, and I have parking. It makes me feel alive—the activity, the people, the diversity… I love the holiday vibe down here [ ] If I'm feeling anxious, I come back here, it's my safe place. If I was to stay in this flat, I'd invest more into décor and *make* it home!" she smiled. This shows how a sense of homeliness, easily adopted, can be eroded by a feeling of insecurity.

Yusuf (44), who'd lived in Barcelona in North Beach for 12 years in a one–bed unit, believed that under no circumstances can a flat be called a home. He had a strong message for me as a researcher and Architect: "Build houses, *not* flats!" Flats, he said, are unnatural. "Space is important to live decently, and that can only be found in a house."

His sparsely-furnished unit had loads of BICs that were all full, and a suit rack stood in the lounge beside a piece of gym equipment. "I can't even fit a bloody stove in the kitchen!" he frowned. "The problem is it's not well thought-out. Social welfare and development should dictate that people need to live in a healthy environment that is conducive to proper living—there's space, privacy, appropriateness. You have a place to sleep. Some people have a bachelor flat… I don't even know what the [heck] that is?!"

This kind of living, he explained, was created by the Apartheid government for certain communities in response to the 'poor White problem', whereas flats in former Indian Group Areas such as Overport are "markedly different from the way flats in areas like Musgrave [ ] are developed. They might be 1-bed units, but they are extremely big. The sociological rationale behind the design was different". Yusuf

perceived urban high-rise living as an unfortunate sacrifice that modern South Africans have been forced to make, and explicitly labelled the resulting spatial conditions a social injustice.

"The way the economy is going, and with crime, many people are relinquishing the comfort of living in a home and moving into flats, complexes, duplexes, communal environments. Things change, earning capacities change… now you'll get only so much value for your money. So how do you grow a [family] in an environment like this? Body Corporates have a problem, it's going to become a serious constitutional challenge, because most have rules where you can't have more than two people living in a 1-bed. What if my wife falls pregnant for example, then we're told to move out!"

Yusuf acknowledges here that the way a flat is designed and occupied makes a difference, but remains adamant that this housing form is to be avoided. Encouragingly, he was the 1% anomaly in this dataset. Otherwise, this research did not discover any deep-seated barriers—cultural, social or otherwise—that prevent local residents from embracing a flat in a high-rise building as their home. This is a small but important finding if we are to present high-density urban living as a viable housing alternative in South Africa.

Number of Bedrooms

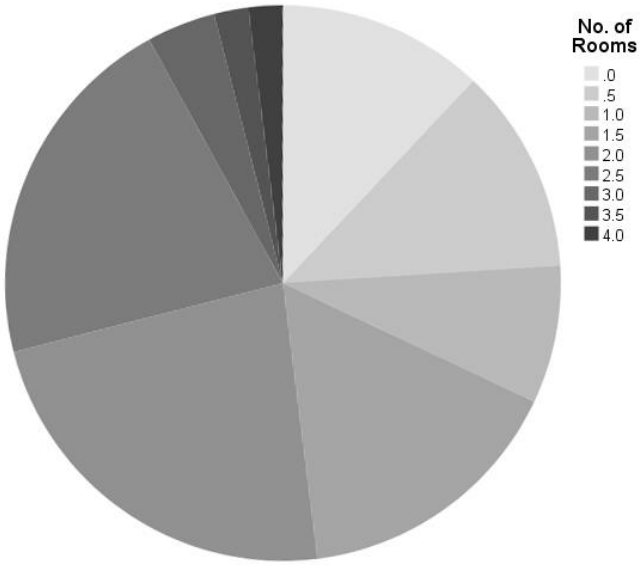
In property sales and letting, dwellings are described by their number of bedrooms. When they were built, most residential high-rises on the Beachfront had recessed open balconies in some if not all units. In a hot, humid context this makes excellent design sense: it provides covered outdoor living space and boosts a flat's climatic performance by drawing in air, creating more surfaces for operable openings, and protecting walls from high angle sun. In Durban, the deep balconies of Art Deco mansion blocks typically had striped canvas roller awnings for weather protection, but the fixed *brise soleil* balcony screens of plain or patterned breezeblocks, popular with the Tropical Modernists and found in abundance in Brazil and Mozambique, never really caught on. A rare example can be seen in In Las Vegas at the northern tip of the study area, where breezeblocks were used to enclose vertical circulation spaces and as balustrades for balconies, all but one of which are now enclosed.

The most obvious reason for enclosing a balcony in this context is to increase a flat's usable indoor floor area, and thereby its rental and resale value. Other reasons include protection from weather, and to exclude street noise, environmental pollutants, birds, pests or people. Described as a 'half bedroom', the resulting space can also serve as an office or sunroom, or to enlarge living areas. On the Beachfront, this enclosure has created a proliferation of half-bedroom flats, often more numerous than their full-bed equivalents. Where a bachelor had full-height, semi- or solid partitions closing off the recess, it was recorded as a 0.5-bed.



Fig. 99: The very last open balcony in Las Vegas.

The chart below shows a leaning towards smaller flats of the bachelor and one or half-bed variety, which together make up 48% of the sample. The Chairman of Shorelands, whose father built the front portion of the building in 1956, said this was driven by market demand at the time. Of 78 units, 71 were bachelors and seven were 1-beds, but by the time the west half was added in 1965, a demand for bigger units brought new flats that were all one and 2-beds.



The bachelor as a flat type appears to have fallen away by the mid-'60s.

Another reason for the high number of smaller flats is that many blocks were originally hotels, timeshares or holiday apartments. Such compartmentalised units with abundant plumbing have proved well-suited to adaptive reuse as quarters for independent or assisted

pensioners, and more recently for conversion to student accommodation.

The smallest unit available, a bachelor or 0-bed flat, (also called a studio) has no separate bedroom and is typically one large rectangular space with a small kitchen and bathroom on the entrance side. In pre-1950 buildings, it was common to find a deeper plan form with a partially-glazed door leading onto a balcony. As explained, these balconies have long been enclosed, usually with sliding aluminium picture windows, and the interior wall removed. In some cases the old doors or half-height wing walls remain, maintaining functional separation without obstructing views, light, or air flow. Other bachelors have a planned sleeping recess that is easily separated with a curtain, and a handful still have their original movable timber room dividers.

Two- and 2.5-bedroom flats together make up 44% of the sample, but I believe this is statistically skewed by the high number of interviews I was granted in newer, stable, owner-occupied blocks in which units were identical and larger. Of the four 3-bed units surveyed (in Groote Schuur, Marine Towers, Cumberland and Grosvenor Court) only two were 'as built' and the two 3.5-beds (Belmont and Courtleigh Heights) almost certainly had open balconies originally, as both now have an internalised bedroom. These rare 3-bed flats, highly sought-after by families living on the Beachfront, rent and sell for a premium and seldom come available. The dearth of larger units is one of the main reasons cited by respondents who plan to move away from the Beachfront in the foreseeable future.

Aside from penthouses, this research suggests that nothing larger than a 3-bed flat has been built in the area—both 4-bed flats in the dataset were converted from multiple units. One consisted of two conjoined 2-bed flats in the old 4-storey wing of Beach Hurst, where most flats, I was told, are owned by a "politically rich" Durban family and used only for holidays, so I was lucky to encounter surfer **Jibreel** (34) who looked after his uncle's unit. Aside from the ground-floor units, which he said were let to Somalian families, he often felt like the only occupant in this part of the building—one example of a relatively low-density lifestyle in a high-density area.

Floor Area

By international standards, South African dwellings are spacious. The abundance of land and tendency of colonial settlers to spread out carried through into the high-rise flats constructed for the ruling class until about 1980. A third of respondents said the thing they liked most about their flat was the spaciousness, and in pre-1950s buildings with high ceilings, the volume.

The mean floor area of a flat in this dataset is 82m^2, and the smallest self-contained unit belonged to **Rajni** in Rydal Mount. The tiny Bachelor was only 36m^2, but its corner position combined with clever space planning meant it was light and airy, and comfortably hosted six or seven.

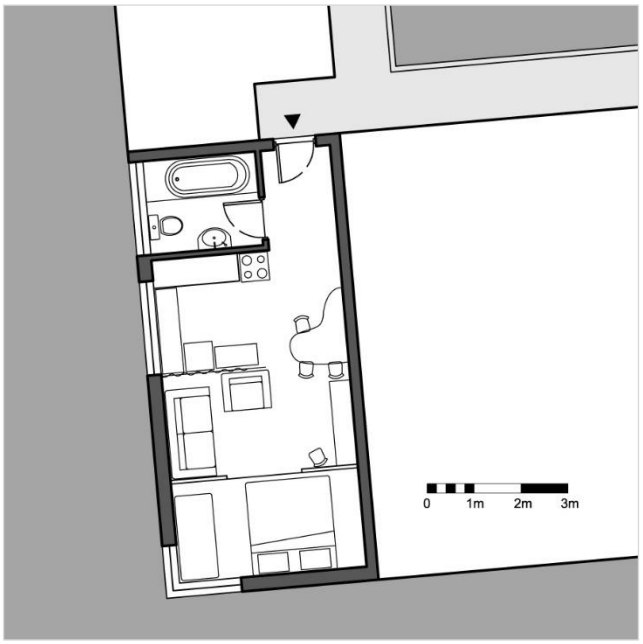


Fig. 100: The littlest flat, Rajni's Bachelor unit in Rydal Mount.

The largest flat in the dataset was nearly 300m^2, comprising three conjoined units taking up 60% of one floor of a small Early Modern building on the North Beach frontline. The owners, a Muslim couple with three children, had bought a 3-bed flat as a holiday home, then later added the adjacent one- and 2-bed units. They moved in after renovations, and **Sarah** (54) now lived there with her youngest son (18) and husband, the newly-elected Chair. The home had four bedrooms, four bathrooms, two lounges, two dining areas, a kitchen with separate scullery and entrance, a prayer room, office, sunroom, games room and tool room. Open-plan living areas, some with sliding glass partitions, flowed beautifully.



Fig. 101: And the largest flat, Sarah's luxurious family home; The matriarch was responsible for the interior fitout.

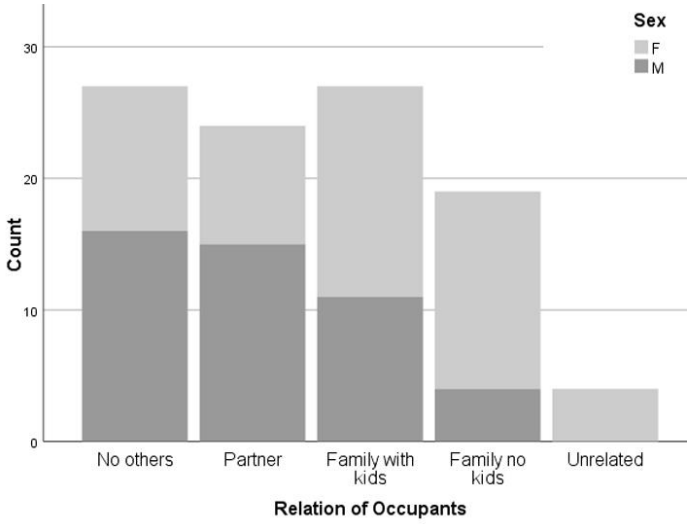
I interviewed Sarah at the island counter while she cooked. "For me, a house in Morningside would be ideal and Glenwood is also nice," she said. "I like leafy suburbs and wide roads, but times have changed and that's not a possibility now because of the crime. I was unhappy in Johannesburg and as we had this flat, moving here was easy, but a place of escape became a home. I've since learned that you take yourself with you… satisfaction is inside."

As Gifford (2007) concludes from reviewing studies on the satisfaction of high-rise dwellers, money can ease the strain of inner-city living. In this example, Sarah had enough space at home to get the quiet and seclusion she desired. They also owned three on-site parking bays, and vacated the Beachfront over the chaotic holiday season. Besides the safe, well-run building, she most appreciated the scenery and people. "Living here you have a sense of belonging; you just meet the most amazing people."

Sarah had mentioned the other block residents and the local Muslim community several times, so despite having disconnected her happiness from 'place', this suggests a link to space and its inhabitants at both building and neighbourhood scales. This outlying case illustrates the conditions conducive to attracting more affluent families to the inner city: larger flats, good security, enough safe parking, proximity to nature, and likeable neighbours.

Occupants

Past studies indicate that who one shares a flat with is linked to living environment satisfaction (Gifford 2007). More specifically, parents of young children and those who share with unrelated others face the most challenges in this regard. Across the dataset, no correlation was found between satisfaction and these two variables; the mean was 8/10 regardless of household makeup.



A little over a quarter of respondents (27 in number), just over half of whom were men, lived alone. In two cases, young men served as caretakers for large units owned by their families, living alone and being joined by relatives for holidays. Only four, all women, lived (solely) with unrelated others. One was **Mpumi**, who sublet three single beds in her Rydal Mount Bachelor to ladies who worked in the nightclub downstairs. Another was **Sandra** (77) who sublet the second bedroom in her 18th floor Connemara flat to an out-of-town youngster who waited tables in a promenade café.

Twenty-four respondents, around 60% of them male, lived with a partner. From the information made available, all were traditional partnerships apart from two same-sex couples.

Retired academic **Alice** (74) had led a full family life before divorcing her husband and marrying Janet. After five years of looking at Beachfront flats, they decided that "north and south were rather crummy, too mixed-income, we wanted to be here in the middle", and bought a 2.5-bed end unit in a sought-after block overlooking Rachel Finlayson pool. They revamped it completely, incorporating the balcony into the master suite and the half bedroom into the now open plan living/dining/kitchen area, creating views straight through the flat. The walls were painted deep hues and the décor reflected an "exotic mix and match of cultures" from the couple's travels abroad. Alice had family on the Beachfront, but this was not their reason for moving there eight years earlier.

"We could've chosen anywhere to live and we chose here. If we had to go somewhere else, I wouldn't know where! There are many things about Umhlanga I wouldn't go for, it would be too lonely and inconvenient, there aren't the facilities around like here. And we wouldn't live in a house again at our age, even though I miss some of the space we had—literally being able to walk outside and touch the earth, even to sit or hang the washing outside. But no, this suits us perfectly, I like to be able to lock and go." In love with the seaside and the general quiet, they planned to live there forever. "If one of us gets ill," said Alice, "the second bedroom will accommodate a live-in carer."

The second same-sex couple was accountant **Avesh** (24) and his Engineer partner, in their ground-floor North Beach flat. After three years living there, they were very involved with the block's social life, one helping people with tax returns and the other assisting a neighbour with her catering business. Their original condition unit had oxblood vinyl tiled floors, a built-in bath, and one of few surviving L-shaped timber and glass room dividers which served as a Hindu shrine.

His first time living in a flat, Avesh was sceptical at first about the small space and lack of a shower, but the convenience, safety and proximity to nature won him over. "Urban living is the way forward, you're one in a million to get robbed!"

We spoke about wealthier Beachfront residents buying and conjoining adjacent flats, and also the second homes that stand mostly empty. "Our family used to have a holiday flat further down Marine Parade, but I feel it's a waste because other people would want to start a family there," he said. "When we were looking for a place, I couldn't afford a one- or 2-bed in the area, but this bachelor was within budget and has everything we need. It may be a little outdated, but it's clean and safe. When we moved here, I enjoyed the vibe. Now I'm used to it, I'd never live in a house again!"

The couple had just bought a 1.5-bed flat with an open balcony in mixed-use Windermere Centre in Morningside, and would be moving soon. Avesh was looking forward to the extra space, and being reunited with his noisy parrot.

Close to half the sample (46 in number) shared their flats with one or more family members. Of this group, 19 flats did not have any children, and three quarters of those with adult family members only were women. The other 27 flats housed between one and four children each, ranging from three months to 17 years old. If I had counted dependent youth, the number would have been higher, as quite a few 18 to 21-yr-olds were living with family while they studied or sought work. Even into the 20s and 30s, it was not uncommon to find adults living with one or both parents. Sometimes this was cultural, for example young Muslim ladies living at home until they marry, but usually it appeared to be a financial support mechanism.

In an interesting finding, certain buildings housed three or four generations of the same family living independently in different flats. Geographically, this occurred in pockets all over the study area and was not restricted to a particular race group or economic bracket—in fact, it was spoken about most often by diverse extended families with one or more interracial marriages. The phenomenon, specifically reported in seven of the 51 buildings surveyed and alluded to in at least four more, was found to be supported by well-run larger buildings, particularly those with multiple wings and 200+ units of varying size, design and tenure: someone who has grown up in their parents' flat moves out to rent another in the block and start their own family, with a view to buying their own flat when they can. It was also common for established flat-dwellers to pass their unit or tenancy to the next generation. Bencorrum and Grosvenor Court are two buildings found to support inter-generational upward mobility in this manner.

There were a few reports of younger adults with substance abuse problems living temporarily with family on the Beachfront. Pensioner **Sollie** (77) and his wife had taken their grandson into their 1.5-bed in Carlton Towers to help him recover from his addiction. They soon realised things were going missing from the flat: the blender, cutlery, tools… anything he could sell to buy heroin, which was available on the street corner not 150m away. He would disappear for days, was eventually banned from the block, and moved onto the streets.

Frank (42) told a similar story. One of seven children to a single mother, he had grown up in Newlands East, of which he was fiercely proud despite describing it as a dangerous, gang-ridden place. In the '90s, his mother had bought a Shorelands flat for R900, where she lived until she passed away in 2015. The flat was now home to one of his sisters and her daughter (9) to whom he was like a father. Frank had lived in an elegant, rented bachelor in the block for 13 years. He told how Newlands East, like similar neighbourhoods, had declined further since the change of government. As poverty increased, crime had risen and become "all about drugs. South Beach is now the same" he said. "My youngest brother is an addict and lives there. He's had many run-ins with the law but I still support him." The brother had lived in the block previously but long been banned, and Frank would take meals down to him in the road. The younger had repeatedly tried to sneak or force his way into the building, which had no security reception, leaving residents no choice but to call the police. I asked which drug was to blame. "Whatever he can get his hands on," he said.

While not confined to urban areas, street level drug use is difficult to control in places like the Beachfront where substances are so readily available. While not an issue that can be addressed by architecture at unit scale, this does speak to the potential for new residential developments to build family and community capacity by creating on-site opportunities for meaningful contact and gainful activities—helping in a garden or learning leatherwork from a neighbour—plugging gaps in neighbourhood infrastructure with publicly-accessible facilities such as a job centre, study hub or youth club.

A few atypical living arrangements were recorded. A nuclear Tamil family in North Beach with two young boys and working parents had their maternal grandmother stay with them during the week to assist with childcare and cooking. Nearby, an affluent widow with two older boys employed a full-time live-in helper. Both owner-occupied flats had 2.5 bedrooms, so the extra person was assumed to sleep in the enclosed balcony.

One particular living situation completely flipped stereotypes. Irish-born **Laila** (64) had met her Durban-born Muslim husband while studying in Dublin, and moved back here to start a family. With their children now grown and living nearby, the couple had a spare room in their 2-bed flat in Old North Beach, so when their long-serving domestic worker had a baby girl who she planned to send "home to the farm", they agreed to adopt the child, who would grow up with the same opportunities as their own offspring. [Lihle],

now 18 and a typical middle-class teenager, maintained close relationships with her biological family. "Everybody around here knows the tall, beautiful Zulu girl with the Irish accent," laughed Laila.

As in any middle-class South African neighbourhood, there are many domestic workers employed in homes on the Beachfront. Residents with higher incomes, bigger families, and two working adults were more likely to have help, and lower income households living in higher densities in South Beach, less so.

At one end of the spectrum were singles who employed a cleaner once a week, and at the other, particularly common for North Beach Muslim families with school-going kids, were full-time 'maids' who worked five or more days a week cleaning, washing, ironing and minding children. It was common to see domestic workers escorting children to and from preschool or *madressa*, or waiting at building entrances for their charges to be delivered from school. Several larger old flats bore traces of the historic segregation between served and servant: a second entrance for staff only. Today, almost all have been bricked up. At unit scale, the presence of domestic workers cannot be evidenced to influence space requirements in any unique way. Well-designed, easy-to-clean spaces with sufficient storage for possessions, linen and cleaning equipment are basic prerequisites for all new homes.

Knowing that few Beachfront flat blocks allow pets, my questionnaire did not cater for the smallest occupants found to dwell in one out of ten units surveyed.

The only dog I met in an interview, a small terrier, lived in a large flat on the top floor of ex-Council Elwyn Court. I didn't ask whether this was permitted; the block clearly had bigger problems, one of which was the complete absence of access control. **Natasha** (38), when asked to describe the security measures in her unit, replied "Chelsea the dog!" The two other dogs I encountered belonged to elderly supervisors who carried out their duties from their flats, and also performed a security function, yapping when anyone approached the front door.

Natasha and her family also had a cat, and the only working adult in the household spoke candidly of her monthly struggle not only to pay the R2000 rent to her mother who owned the flat, but to feed her children and her animals. The two other cats I met belonged to long-term residents and had lived happily in flats all their lives: Sheeba, soulmate of **Sumaya** in Port O Durban, and Spliff, who came to live with **Shanti** in San Remo when her partner passed on.

One respondent kept a dwarf rabbit in her rental flat, which technically was not allowed, but her friendship with the supervisor meant he turned a blind eye. Snowy the rescue rabbit lived in **Zainab**'s kitchen in Ottawa Court, in a glass fish tank containing leaves, sand and sawdust. They had tried to allow the rabbit to free-roam, but Snowy struggled to hop on hard surfaces, which made him slip and slide. For rodents, I encountered only one hamster that had been rescued from the driveway of a construction site by an animal-lover. I expected to find quite a few fish, but only one flat had a tank housing two exotic freshwater specimens. It turned out that most buildings either expressly forbade or strongly discouraged their keeping. One supervisor said "No! What if the tank bursts? It causes *huge* damage."

The most popular pet in this dataset was the parrot, specifically the African Grey. The five I met were intelligent, charismatic creatures, prone to disrupt the interview if they felt excluded. Although most blocks had a 'no birds' policy, residents generally enjoyed having them around, so they were tolerated unless neighbours complained. **Neela** (41) had hatched Tinkerboy from his egg ten years earlier, and the Golden Sun Conure's open cage took pride of place in her rented bachelor in Wendover, one of few blocks that allowed certain pets. "My bird is loud and I've never had a complaint," she shrugged, "Everybody knows him, they greet him in the lift."

The only person to keep smaller birds was **JR** (48), who shared a 1.5-bed rental unit on the upper ground floor of pet-friendly Grandborough Court with her partner, adult son, two cockatiels and six budgies. The old Art Deco block where she'd lived for 17 years had high ceilings and spacious flats, but their unit, thanks to its end position and deep, wedge-shaped plan, was so dark that house plants wouldn't grow. This was unfortunate, as JR loved nature and believed in "a touch a day", but she had adapted by caring for the lobby plants instead. They'd found it impossible to sleep in the east-facing bedroom due to the night noise from the carpark opposite, baking morning sun and poor air flow, so moved their bed set into the lounge and used the bedroom as JR's office.

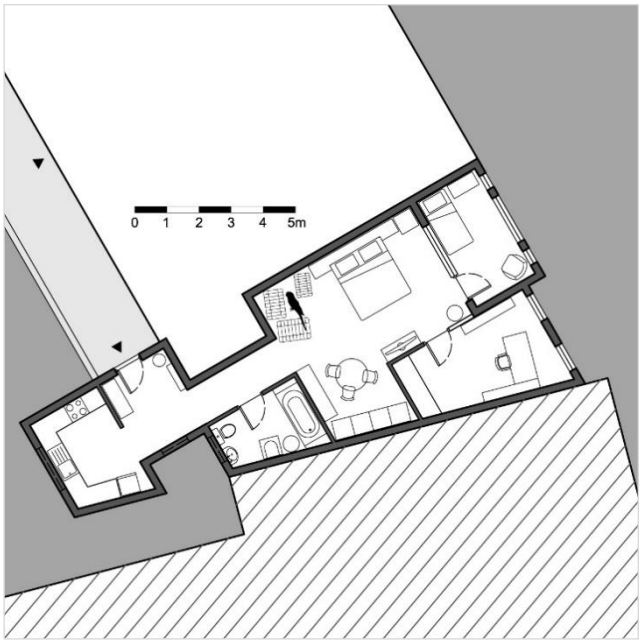


Fig. 102: Birdsong made this cool, dim flat feel like a forest.

Zimbabwean **James** (33) worked in a North Beach hotel and lived with his wife and three-year-old son in Sandringham, another Art Deco block in South Beach. James told of a family like theirs with a young son, who'd shared a bachelor in their previous building with an older Nigerian man. They thought he lived alone on the other side of the curtain, but one day the curious child pulled it aside to reveal a giant tortoise. While it might have had something to do with *muthi* [traditional medicine], James believed it was primarily the man's pet. This brought to mind Roald Dahl's *Esio Trot*, which tells of a pensioner and a middle-aged woman who live in an urban high-rise building and form a relationship 'between balconies', based around her pet tortoise Alfie. The story is only feasible because of the architecture: the protruding balconies stagger like steps, so Mr Hoppy can look down into Mrs Silver's huge floating garden.

This tale and these anecdotes challenge us to think carefully about how urban residential environments might better cater for the inherent need to be near nature—not just plants, but living creatures too.



Fig. 103: Balconies in *Esio Trot*, illustrated by Quentin Blake.

At present, most South African flat-dwellers must forego the option to keep pets. Yet for each interviewee with an animal, at least one other mentioned that they'd had to give up their pet(s) when moving to the Beachfront, and missed having or would dearly love one. This implies that at least one in five flat-dwellers would probably keep some sort of pet if allowed. A quick search led to the website of a Johannesburg property broker reporting "a notable rise in pet ownership among young, working individuals and couples without children". This group make up a large portion of renters, so "pet-friendly properties are in high demand and few-and-far-between!" (*etchellsandyoung.co.za*).

Introducing pets into high-rise living environments is likely to attract a more diverse cross-section of residents, bolster collective empathy and tolerance, and ultimately result in more holistic and grounded residential environments.

Indoor Density

As discussed in Chapter 4, the amount of dwelling space a person needs to feel comfortable and not crowded varies tremendously. In South Africa, the low residential densities found at neighbourhood and building scale typically translate into low indoor densities. This is visible in the northern half of the study area, where most flats are occupied sparsely by today's standards, but in the southern half where occupancy limits are not enforced or have been revised, densities are much higher. The average occupancy of a flat in this dataset is two-and-a-half inhabitants. Just under a third had two, just over a quarter had one, and one quarter had three. Nine flats had four occupants, and seven flats, five each.

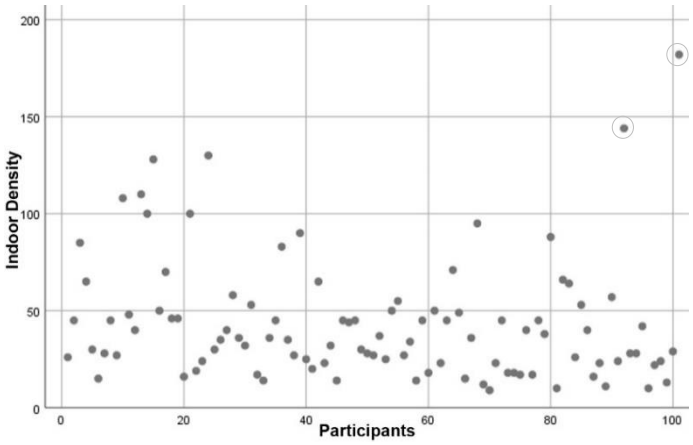
The only person living with more than four others was **Natasha**, whose 120m^2, (officially) 2-bed home in Elwyn Court accommodated eight people and two animals. Although the resultant density was quite high at 15m^2/person, both balconies were enclosed, the generously-proportioned ex-Council flat had separate kitchen and dining areas, and the two youngest occupants were infants, so although the place was not in great condition, it felt homely and not too crammed.



Fig. 104: This flat houses Natasha's family and her half-sister's.

The scatter graph that follows shows how much personal space is allocated to each of the 101 interviewees (one dot) and how that compares to the others. On the top right (circled) is **Jibreel** in his uncle's 4-bed flat, who enjoys the lowest density with 182m^2 to himself. Below him and to the left is **Aphiwe** (25) who

looks after his grandfather's 3.5-bed holiday flat in Belmont.



Of the handful of respondents with more than 100m^2 to themselves, all but one had previously shared with a partner who'd passed away. Even the two dots *on* the 100m^2/person line had qualifying circumstances: Sarah's nest was emptying, and widow **Yasmin** (61) in Old North Beach had grown children who lived abroad and had found her a 2-bed, 2-bath flat to rent so they had a place to stay when visiting. This indicates a natural threshold around 100m^2, over which a flat-dweller might feel like they have too much space. Indeed, more than three quarters (77 in number) of interviewees dwelled in densities of 50m^2/person or higher, and dots are evenly spread across the bottom band, showing a range of densities that suit different people.

Overall, the average indoor density of the flats surveyed was 44m^2/person. The mean density for different size flats varied more than 500%, from 27m^2 in the bachelors and half-beds, to 141m^2 in the 4-beds, which reflects the tendency for those who can afford it to secure larger units and inhabit them sparsely, and conversely for those with fewer resources to secure smaller units and fill them to capacity.

The highest density captured in the study area was 9m^2/person, and although found only once in this dataset, the same configuration—four students sharing a compact ex-bachelor or holiday flat—was observed to occur all over South Beach. This was the standard model for student residences in the area, and every building that permitted increased occupancy and sharing with unrelated others seemed to have parts where only students lived. Wavecrest, a rental building owned and managed by Mafadi Property, was one such block (see Fig. 80).

At time of interview, **Wasiphakonke** (20) was studying Business Management, but planned to transfer over to Logistics—a decision that, she agreed, probably had a lot to do with their panoramic harbour view. From Johannesburg, the young lady had chosen to study in Durban because she followed the soapie *Uzalo*, which had painted the city as a glamorous place. "It's not, TV lies… but I'm happy here," she smiled.

Having grown up in a large suburban house, adjusting to inner-city life hadn't been easy. Wasiphakonke had first stayed in Albert Park, which she hated, then met friends who had a spare bed in their Wavecrest unit where they each paid R1125/month towards R4500 rent. Here she liked the whole experience: the people, the tourists, the beach and the entertainment at uShaka, which she used often. The flats came partially furnished with a stove and fridge, and the students brought their own beds, wardrobe, desk, chair, and mirror. The otherwise neat building sorely needed maintenance, with water damage inside the flats (bubbling, peeling paint) that hadn't been fixed despite many requests, and leaking fire hoses in the corridors. Despite this, Wasiphakonke was happy with her accommodation (7/10), finding it not only "clean and respectable" but "spacious, not too cramped"

"I like it here," she said. "I like living with people."

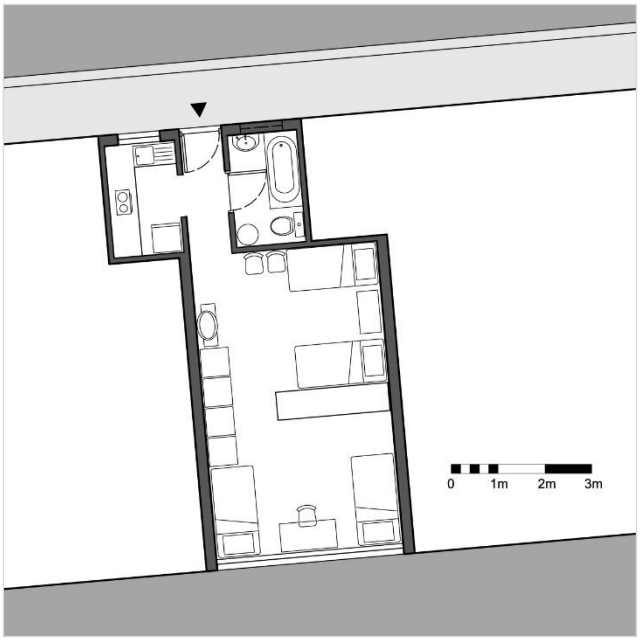


Fig. 105: Four students share a studio unit in Wavecrest.

The block's security was patchy, with no gates or burglar guards, so I asked if she ever felt unsafe. "No," she replied, "in fact, we only lock the door at night, coz we have lots of visitors and know lots of people. If anything happened we'd just yell for the guys next door"—one of whom was her flatmate's boyfriend. "Us students tend to live on the top two floors. The girls upstairs use our floor to get to their place [on the roof], and the guys play music. These are the party floors! My flatmates know people, we see them in reception, the lift, shops, coming back after the club. There's definitely a network in this block. It's nice coming home to your same age group."

In the street-facing (east) wing, bachelor units were a bit bigger and rented for R5400/month, 10% more than

a sea-facing bachelor in North Beach. This seems questionable given the location, condition and 'crowdedness' of Wavecrest, but larger bachelors in at least two cases accommodated families of five, as compared to the maximum two allowed up north.

One such family was the supervisor, his wife **Pamela** (30), their two children (10 and 7), and her pregnant sister, which resulted in an indoor density just under 10m^2/person. The unit's end position gave it extra floor area and another window, and the adults slept on one side of the wardrobe divider with the kids in bunk beds on the other. The kitchen wall had been removed above counter height, allowing a view into the living area, which Pamela liked as she could watch her children while they played. Her only issue was the small kitchen. Storage was a challenge, and with no space for a washing machine, she had to handwash all their clothes. The décor was "clean, simple, unfussy" and the walls bare, save for an enormous flat-screen TV. They'd had no say in their lodgings, as the flat was included in her husband's package, but Pamela liked its design, which she found "compact and connected", and was happy her kids had a good primary school nearby (Addington). The family were awaiting bond approval to buy a house and would look around in the suburbs of Montclair, Umbilo, Yellowwood Park and the Bluff.

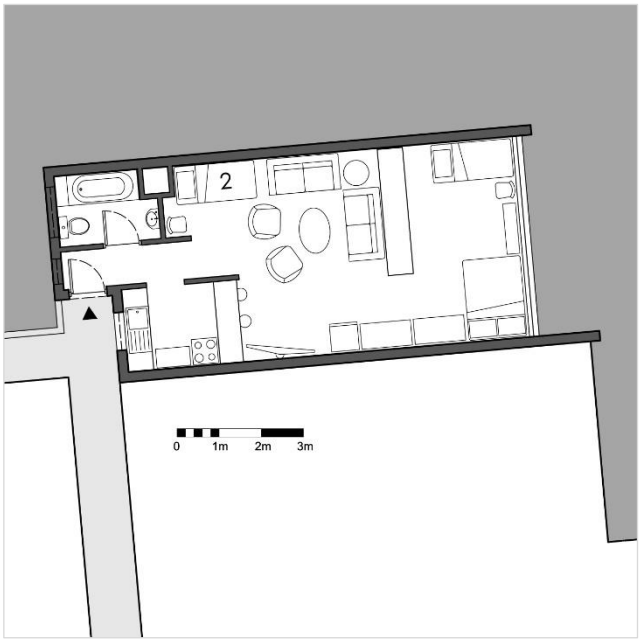


Fig. 106: A larger bachelor flat in Wavecrest sleeps five.

In around 10% of the flats surveyed, individuals had floor space of 15m^2 or less. Most were bachelors with three to five occupants, but one was a tiny (60m^2) 2-bed in Capella, shared by a family of five. Two 2.5-bed units fell into this group: **Natasha**'s in Elwyn Court, and the home of **Jamila** (44) who lived with her husband and three children in Tugela, North Beach.

The couple, who had bought the flat 23 years earlier and raised two girls (21 and 19) and a boy (13) there, had slowly renovated over the preceding ten years, enclosing the balcony to create a separate bedroom with sliding doors as their son grew to need his own space. The open-plan living area was contemporary and minimal with "warm, earthy" finishes and the spaces flowed well. Amazingly, the unit was just 70m^2, resulting in a deceptively high density of 14m^2/person.

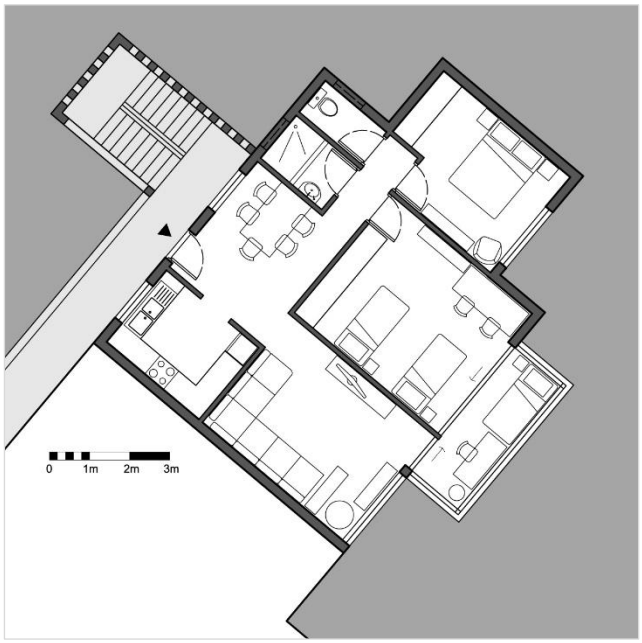


Fig. 107: This smart, redone 2.5-bed unit in Tugela houses five.

Jamila had been a Trustee for 19 years, so knew almost everyone in the block. They only locked the front gate when they went to bed, and there were no burglar guards at all. Throughout the interview, ladies from the building came and went, stopping by to drop off or pick up food or have a chat. In the predominantly Muslim block, my interviewee said 40% of people kept to themselves but the other 60% were "like this". She had around 60 friends in Tugela. "It's how you are with people," she said. "That's how a community works."

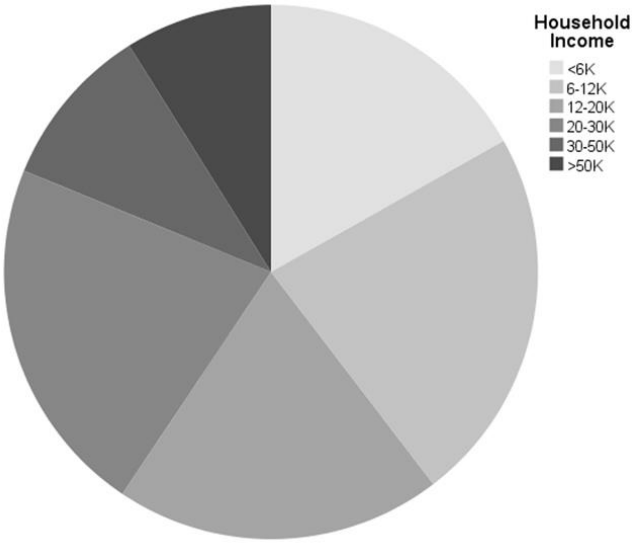
Twice a week, her husband's friends from the mosque would come for dinner. "We host lots of family gatherings and parties here, it fits twenty to thirty guests at once." This family clearly did not feel crowded. On the contrary, Jamila not only felt that the occupancy limits for the building were too low, but cited the NW-SE views they enjoyed due to the flat's "openness" (visual and actual) as her favourite feature.

She eventually settled on two things that could be improved. First, there was only one full bathroom, and although the WC and shower were separate, they could really do with a second toilet. Second was the kitchen. "It's too small, all of us can't be in there together, we have to spill out. When I renovated, I should've made the kitchen open plan, but Islamically speaking I felt I needed to be behind the scenes with hubby in the foreground. If I got a windfall now I'd rip out the wall."

Clearly discernible here is how many Beachfront flats are voluntarily occupied at densities significantly higher than originally intended, but not necessarily by lower income residents, and with more positive than negative results for occupants.

Household Income

Participants were asked to self-identify into one of six possible net monthly household income brackets. The brackets, tailored to the middle-class nature of the Beachfront, focused on the spread within the middle brackets rather than those earning under R6000 or over R50 000 a month.

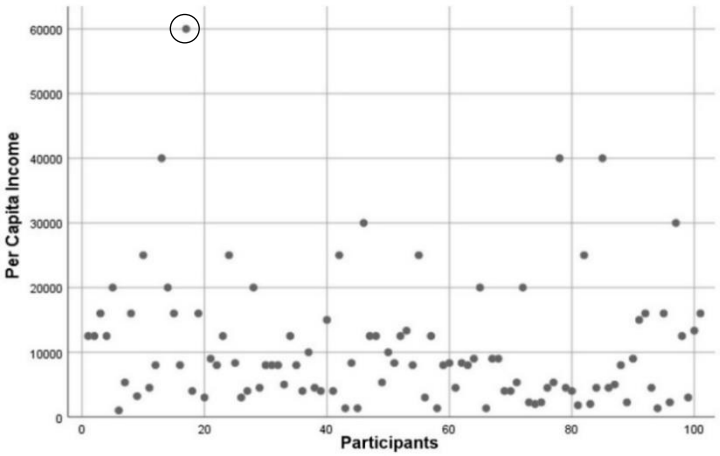


While this provided a quick litmus test of whether the study was attracting respondents across the desired socio-economic spectrum, it quickly became apparent that household income data alone tells us very little unless it is first divided by the number of occupants to arrive at a 'per capita' income. Even this did not account for a number of moderating factors such as the relationship of occupants, tenure type, whether the flat was paid off, the levy costs, and the respondent's life stage and fiscal responsibilities. Other reasons to take this income data as indicative only are the small dataset, diversity and complexity of situations being examined, and a research design that predisposes qualitative over quantitative data. One comparative example of two older adults living alone illustrates this.

Architect **Alex** (55) had bought an upper-floor unit in Groote Schuur after his divorce, and now lived half the time near his practice in Umtunzini and the other half on the Beachfront. He renovated the flat entirely, reducing it from a 2-bed to a 1.5-bed by open-planning the living area, off of which was a recess separated by a curtain with bunk beds for when his teenage children stayed over. Completely satisfied with his part-time home (10/10), Alex was relaxed and chatty until I mentioned money. Pointing to the top income bracket, he felt the need to qualify this by outlining some of the expenses he was liable for: private high school fees, overheads and salaries for his practice, the cost of two separate residences, and travel. This meant he was reluctantly considering renting out the flat and bunking with friends when in Durban to work-seek.

Connie (64) lived just behind Groote Schuur in Ocean Way, a small block made up entirely of bachelor flats. The long-time Beachfront resident had bought her place upon retiring, one of the few end units with partial sea views framed by frontline high-rises. Having worked odd jobs much of her life and spent many years as a municipal toilet attendant, Cathy had no dependents and survived on a modest State pension, so fell into the lowest (<R6K) income bracket. She had no car but owned an on-site parking bay which she rented out for extra income, and caught the PeopleMover bus to go visit family and run errands. Connie enjoyed a stress-free life in her clean, bright home and rated her satisfaction 8/10.

To convert income data into *per capita* figures, each bracket was interpreted as a single 'mid' value [R4000, R9000, R16K, R25K, R40K, R60K] and divided by the number of occupants in the unit. The results indicate a situation far closer to that on the ground, and the graph below reflects the income disparity found even within one relatively affluent part of a city.



Nearly two thirds (64 in number) of respondents lived in households with per capita income of R10K/month or less, and roughly half fell under R5K. A further 26 had between 10K and 20K to spend per person, seven had between R20K and R30K, and four enjoyed upwards of R30K each. The lowest was around R1000, and circled up top is Alex. Using this method of analysis, the mean per capita income in the dataset was R10 840/month.

To establish how this relates to the bigger picture, research led to an article (Head 2015) about a tool developed by UCT's Southern Africa Labour and Development Research Unit (SALDRU) to help people establish where they sit along the country's income scale, and understand the true extent of inequality.

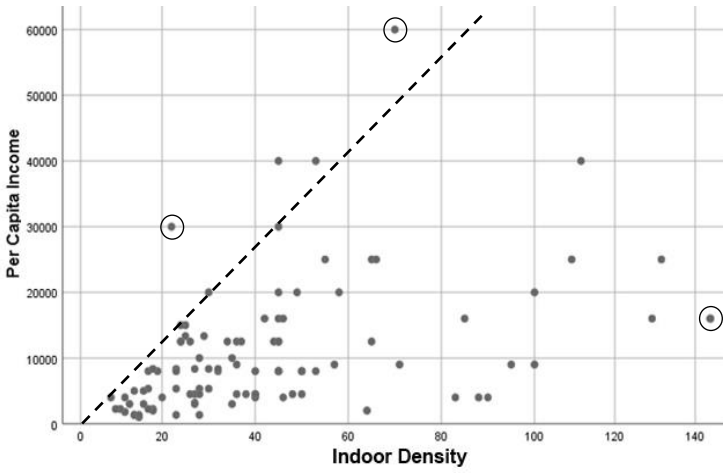
These statistics are extracted from a per capita graph:

- The bottom 10% of South Africans live off R345/mo
- 46% of South Africans earn less than R1000/mo
- 2/3 of South Africans get by on under R1800/mo
- 81% have a monthly budget of R4000 or less

This puts my research into perspective. SALDRU's work forces us to rethink the definition of 'middle class' and its position in the socio-economic landscape relative to the brackets either side of it: "SALDRU's research finds that 50% of South Africans are chronically poor. Only 20% of South Africans belong to the stable middle class, whilst 4% belong to the elite. The rest belong to the transient poor (11%) and the vulnerable middle class (15%)" (*www.saldru.uct.ac.za)*

Their research identifies the vulnerability of the middle class and lack of social mobility—more specifically, 'inter-generational failure'—as two key reasons why South African society remains so unequal. As such, new housing models aiming to address inequality cannot just focus on a single economic bracket, but must embrace two or three adjacent groups with a focus on the upward mobility within and between them.

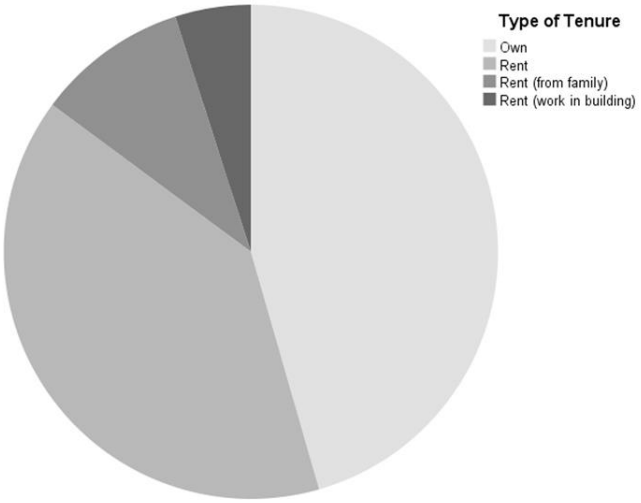
Indoor density is another variable useful to map against income. Below is a scatter graph with m^2/person increasing along the x-axis and per capita income (R/month/person) increasing along the y-axis. Jibreel's dot, way off to the right on the R25K line, was cropped off. Up top is Alex with 70m^2, and far right is Aphiwe with 144m^2 (both circled). What emerges is a wedge shape emanating from (0,0) into which all but a few dots fall, with a notable clustering towards the point. The top side of the wedge might be seen as a comfort threshold, above/to the left of which occupants are living with less floor space than they can technically afford. While not the case for Alex, this theory is supported by the circled dot middle left; Abdullah (52), well-off enough to retire early, had downsized from a 3-bed to a bachelor flat, only to discover it was too small for a couple, so put it on the market hoping to find something larger.



Tenure and Costs

A huge variety of tenure types and arrangements are found along the Beachfront. At unit level, the only important distinction is whether occupants own the unit they are living in (owner-occupiers) or rent it from someone else (tenants).

Slightly under half the sample (46 in number) were owner-occupiers. If the respondent (or their family) fell into this category, they were asked to estimate the current market value of the unit, but not whether it was paid off or what the monthly rates and levies were. The cheapest owner-occupied flat was valued at around R200K, a south-facing half-bed 1st floor unit in South Beach, bought some years back for R180K cash. The highest-valued, Sarah's sea-facing, conjoined 4-bed family home in North Beach, we estimated to be worth around R6.5 million. The average approximate market value of an owner-occupied flat in this dataset is R1.28 million.



Rental arrangements were often complex, and two groups stood out as distinct.

The first were those who rented from family (ten in number). Some enjoyed a discount, some paid a token amount, some nothing, and others covered just rates and levies. One lady living with her children rented from her ex-husband for about 80% of market rate.

The second group were those who lived and worked in the building but did not own their unit (five in number). Three of these units were in some way different to the building's standard offerings, so were excluded from calculations. The two other respondents were supervisors who had upgraded from the designated unit—usually out back, and either substandard or otherwise occupied—to a standard lettable unit.

Several long-term tenants renting directly from the owner reported good landlord relationships. Tailor-made arrangements were not uncommon, for example tenants doing routine maintenance at their own cost, or sprucing up the flat (painting, fitting shelves) and submitting materials-only invoices to the

landlord for reimbursement. Such concessions were typically made in exchange for reduced rent or 'rent control', so limiting the annual rent increase to say 3% instead of 6%. In two cases, long-term tenants had negotiated first right to buy the unit when the owner—or more accurately, the family that had inherited the unit—decided to sell.

The worst off were renters who dealt directly with unresponsive and absent landlords. **Prudence**, who'd moved into Courtleigh Heights a year earlier, was unfortunate to have such a landlord.

"The owner lives in Pietermaritzburg and has never been here. You should have seen how filthy this place was when we moved in, it took us seven days to clean! We painted and renovated ourselves at our own cost. It's not like Shorelands [where she'd lived previously], nobody helps you, the tenant is expected to do everything themselves." When they moved in, pigeons were nesting on the window ledges. "We informed the building management and were told we had to chase the pigeons away ourselves. It wasn't until mom threatened to call the health department that someone came and sorted it out."

With most absentee owners, there was at least some accountability to the supervisor or the board, so tenants' rights were better protected. Many who rented through a property agent complained bitterly about incompetence or unresponsiveness.

Tenants were asked how much they paid monthly, excluding extras like parking and bills.

The cheapest flat in the dataset was a 45m^2 bachelor in Whitehaven in South beach, which rented for R2800/month. **Tesh** (41), "A Xhosa girl from Eastern Cape", shared with her mother and two sons (9 and 1). Having lived there for nine years, she was very fond of the building and was saddened by its neglect and steady decline in management. This she attributed to absentee landlords who were not held accountable, and felt the problem was compounded because tenants were not interviewed before moving in and did exactly as they pleased: dealing drugs, throwing things out of windows etc. The supervisor mentioned feeling sorry for the cleaning staff, and the place was reportedly infested with cockroaches and rats. Years earlier, Tesh had rented at tightly-controlled Fairhaven shareblock not 300m away, and despite finding it unbearably oppressive, admitted Whitehaven could learn a few things from them.

"At Fairhaven they were very strict, they would contact absent owners and force them to maintain and fix things. There, the Board was responsible and they worked with the supervisor to make sure the building stays in good condition. Here, most flats are in very bad condition." Notably, Fairhaven had more owner-occupiers than Whitehaven.

Despite the building-level issues, Tesh's flat was clean and homely. She liked the unit's spaciousness and the separation provided by the half walls. The good value building suited her well and was "close to everything: work, the kids' schools, leisure, pools, police, transport and beach life. I'd like to own. I'd look around the neighbourhood, but would like to buy in this building. I'm attached to it, I've shaped my identity here—and theirs," she said of her sons.

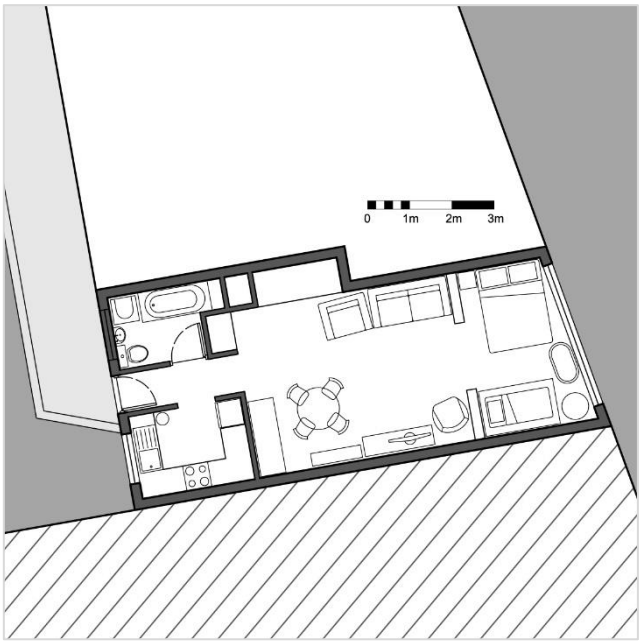


Fig. 108: This bachelor in relaxed Whitehaven sleeps four.

The highest monthly rental in the dataset, R13 000, was paid by Englishman **Rob** (63) for his 3-bed Groote Schuur penthouse. Unfurnished, with secure parking and sweeping views, the space could probably have fetched more. The Crofton & Benjamin block originally had a communal roof terrace and pavilion, but at some point, the common room was split into three and incorporated vertically into the flats below. The unit hadn't been renovated since, and Rob found the layout a bit odd, as the small, outdated separate kitchen was "in the wrong place". He loved the architecture but felt the building's narrow footprint had compromised the planning of units. Overall, the mean monthly rental for a flat in this study was R5 815.

I referred to one small group as the 'adamant renters':

> "I will never own a flat run by any sort of committee, and as for the freestanding house I did own, the security was a nightmare. Then when you want to leave, you can't! I'm a travel journalist, I don't want the responsibility. Also, unless you plan on staying put or want to 'flip' a property quickly, it's *not* a good investment, I don't care what anybody tells you!"
> ~ Shanti, San Remo

Far from transients—Jacobs' (1961) 'birds of passage'—this group voiced high levels of place attachment but had chosen financial independence and lifestyle agility over owning. Otherwise, home ownership aspirations were found to be high. Asked what they would change about their living situation, 18 respondents (a third of all renters) said they would

buy the flat they were living in, or a similar one on the Beachfront. Most added that this was just a dream, as the local property market was out of their reach. This issue has been exacerbated by the endurance of shareblock flats which, ineligible for finance, seldom make it onto the open market and are accessible only to well-connected elite buyers.

At the other end of the scale were a handful of interviewees who owned more than one flat in the building or another/others in the study area. This was common practice on the Beachfront, and stories abounded of owners living in a nicer block up north and renting out their flats in less desirable blocks further south. One couple did just the opposite:

> "This flat has been in my husband's family for 25, 30 years, we bought it from the estate seven or eight years ago. We bought in The Sails [on the Point] when we came here from Johannesburg. It was lovely and luxurious, but absolute chaos with the holiday lets—we found a rugby team in our jacuzzi once! We stayed there while renovating this flat, then moved here. We own another flat in Montezuma and have great tenants who we look after. We've realised we'll never get our investment back here, so choose to live in it, enjoy the positives and concentrate on the more valuable assets."
> ~ Laila, Marine Sands

This kind of landlord contributes positively to a neighbourhood by being socially, emotionally and financially invested in the flats they own. Ethical private landlords who live locally and operate elsewhere fill a gap in the property market by making well-located, high-quality space available to transients, adamant renters and those for whom owning is not feasible.

Interiors

The flat interiors in this study varied tremendously, from a bare space containing only a mattress and suitcase to one of showhouse standard.

Respondents were asked to describe "the style of your flat, the furniture and objects you choose to surround yourself with", but more than the actual furniture and objects themselves (conceived space), what bears relevance is the on-going interplay between the movable items and the spaces and surfaces of the dwelling container (perceived space) and the meaning/s ascribed to that space by the user/s (lived space). These interiors indicate the tastes and trends to be found here, and are best viewed in the context of what has gone before, to help us better understand what the future dwelling container needs to be and do.

In South Africa, properties change hands completely unfurnished save for permanent fixtures: built-in cupboards, counters, sanitaryware and appliances. Buyers are free to do what they like to their flat's interior, including structural renovation, which requires Board, Engineer's and Council approval that is sometimes bypassed. Renters, with no power to change the container on offer, must adapt their possessions and lifestyle to create a functioning home within it.

An ethical landlord will clean, repaint and fumigate a flat before changing tenants, and respond fairly to reasonable requests. Most older flats have been kept liveable by installing a high-pressure geyser and a shower. Upon renovation, kitchens typically receive a double sink and a built-in stove/oven as first priority, and will often have one or more walls removed to create an open plan.

For the visionary question, over a quarter of respondents (27 in number), three fifths of whom were tenants, said they would refurbish the flat if they could. The most common answer was: "I'd buy this flat and the one next door, break through and renovate!"

More than just ownership aspirations, this indicates a strong desire to craft an adequately-sized permanent home in a well-located urban high-rise. If more such dwellings were available to middle-class buyers and renters, along with more agile finance structures and the mechanisms to accommodate household change, the data shows they would be well-received.

Overall, there was a tendency for flat-dwellers to prioritise utility, comfort and affordability over aesthetics when furnishing their flats. Several people used the term 'downsized' to describe their move to the Beachfront, as especially those coming from houses had needed to get rid of possessions, put them in storage, and/or buy smaller furniture. Many of lesser means—and some with plenty—explained, often proudly, how their home contents had been gifted by family, friends or neighbours.

On the other end of the spectrum were homeowners who had poured vast amounts of time, energy and money into renovations, treating the space as a *tabula rasa* upon which to 'make their mark'. One pensioner's vignette captured this perfectly. Their flat had been renovated six years prior in warm tones, with high-spec fittings and ceramic floor tiles. "It was very exclusive then, but not anymore. Now it's all old-fashioned (mahogany, brown suede), the grandkids tell me it's horrible! [ ] My daughter bought a flat in Montezuma a few years ago for R1.5M, it had been newly-decorated and redone, absolutely top class everything (carved and fitted cupboards, steel doors) and *totally* against her taste [so] she ripped every single thing out and started from scratch. [ ] Now it's all pure white, you walk into this vast lounge with only a TV, settee, dining table and a bookshelf, nothing else… and that's the way she likes it."

This reminds us how quickly tastes and fashions can change, and raises the pressing issue of the serial and oftentimes superfluous renovation of Beachfront flats.

In some cases, flat renovation signified progress up the economic ladder. **Gerald** (44) lived with his wife and parrot in South Sands near Addington, in a 13th floor end unit with sweeping sea and harbour views. He'd grown up in Malagazi outside Umlazi in a 2-bed vernacular kit house with a veranda, married his childhood sweetheart, and toiled hard to secure their dream home. My subject, who worked in armed response, explained how the couple's background had influenced their taste: "I wanted more of an open plan because where we came from it was mostly enclosed. The house was tin, and we didn't have much light coming in, so I like it to be bright. Where we grew up we didn't have tiles, we had linoleum runner mats laid over concrete. [ ] In my parents' day they couldn't afford this, so now we are working and can, this is what we want. It's very minimal, we like space."



Fig. 109: Gerald's slickly refurbished 87m² flat in South Beach.

In these examples, the absence of unnecessary *stuff,* of clutter, is perceived as a desirable state, which bodes well for the future of collective housing and the sharing economy. That this can only be achieved in this context by stripping a dwelling container of any traces of its past, is regrettable. Herein lies not just a threat to the long-term structural and spatial integrity of these buildings but also, I propose, a specific type of spatial injustice: one enacted on the architecture rather than its inhabitants. No block is designed to withstand repeated major renovation of its component parts, and no system that requires one to buy and renovate a flat in order to contribute to the making of the city can truly be just. A closer look at the interiors of two very different rental flats might offer some clues as to a more sustainable approach, here.

Where Gerald's love for light, open spaces was shared by many, his love for shiny things was not, for one reason: nothing made of metal lasts long in this corrosive marine environment. As such, most seasoned Beachfront-dwellers had settled on timber as their material of choice for furniture.

Durban-born **Rosco** (35) met his sportswoman wife in Johannesburg, and moved back to start a family. After their first son was born, they upsized from a Connemara flat to the frontline 2.5-bed corner unit they'd rented for four years at time of interview. The landlord, a Durban trustee who lived elsewhere, had recently renovated, painting the walls and adding an open hatch to the kitchen. The oiled, two-tone parquet floors were in excellent condition. Rosco worked in construction and his wife had studied interior design, so their décor had a modern DIY feel: light timber furniture, neutral tones and live plants. Their boys shared the second bedroom, and the sunny enclosed balcony served as a playroom. A daybed and table made of up-cycled building materials (concrete blocks and timber shipping palettes) were finished off with a colourful throw, cushions, herb trays and toys.



Fig. 110: Playing on the adventure balcony before mosque.

Open, accessible spaces with hardwearing, neutral finishes, made more homely with simple, comfortable furniture and soft personal touches, were observed to work well for all types of people.

The largest half-bed flat in the dataset housed **Zolile** (54) in Sandringham. The only one to appreciate a separate kitchen so he could keep out smells and smoke, he also liked closing the glazed doors to his bedroom (the ex-balcony) for privacy. The academic and pastor often received visitors seeking advice "so I need a table and lots of places to sit" and had even performed marriage ceremonies in the spacious lounge. Zolile struggled with his eyesight and mobility, so on request, his Umlazi landlady had replaced the

borer-eaten strip wood floors with white porcelain tiles to reflect the corridor light and contrast with his black furniture so he could navigate easily in low light. "The space planning is deliberately uncluttered and unobstructive and I chose the furnishings to feel cosy," he said. Pops of colour completed his décor, with Christian messages and a large handmade birthday card from his neighbours on the walls. This illustrates how an old dwelling container can be adapted without major renovation to meet the needs and reflect the personality of its occupants.

The data gathered supports the notion that future buyers and renters will be happiest with dwelling containers that are light, open and flexible in their planning and finished in neutral, long-lasting materials amenable to personalisation.

Security

Safety of self, family and home concerns all South Africans regardless of age, race or SES. Street crime can happen anywhere to anyone, but home invasion makes one's most private space feel unsafe. Today, home invasion in middle class South African suburbs tends to be premeditated and armed, and occurs increasingly when occupants are home. As a result, most freestanding houses are secured with high perimeter walls, electric fencing and/or razor wire, alarm systems and armed guard response.

Resistant to living in a fortress, 15 respondents explicitly cited safety as the main reason they lived on the Beachfront. Many more mentioned it as their favourite thing about their flat or building. Worry about housebreaking was low here, but without layers of physical barriers at unit level, this was more a function of the collective security at building level. With very few exceptions, Beachfront residents, once inside their building, were witnessed to live with relatively (and sometimes unbelievably) low levels of home security. A single lady who slept with her doors unlocked said "Lots in the building do this; I know we probably shouldn't but it's very safe here".

The two lines of defence examined were a flat's entrance and its windows. All except 14 of the units surveyed had security gates, which were not supplied in the social housing or commercially-owned rental blocks, where a ledged and braced timber door with a single handle lock was standard. Both young ladies in Wavecrest worried about break-ins, one because she knew the locks could be opened with a knife, and the other because a friend's clothes had been stolen by a visitor.

One in five respondents had never used their security gate. On the fifth floor of Courtleigh Heights, **Rosco**'s Trellidor stood untouched, the front door stood ajar during the day if someone was home, and was closed with only a Yale at night. The outside windows had no burglar guards—"too high", he said. We discussed how lucky one is to live like this in South Africa. At time of research there had been multiple reports of targeted suburban home invasions involving armed men. "That's horrific," said Rosco, "it's easy to start carrying a gun with you but we don't believe in that. Nobody has ever bothered me. My kids have never been exposed to crime and fear, it's very important to me that they don't grow up traumatised."

Two thirds of the sample used their security gate sometimes, quite often as the primary barrier against the outside world. The locked gate/open door configuration was common: one in three respondents did this regularly, and some all the time, especially seniors in more sociable buildings. Front doors were of every variety imaginable, from the simplest type already mentioned to the most elaborate anodised aluminium set available. Most front doors originally had an opening fanlight above, which had been sealed, painted shut or replaced with fixed panes, hindering occupants' ability to control air flow in the unit and rendering the open front door essential. A few were fitted with rigid stays to hold the opening leaf in place, but the rest relied upon doorstops or sand snakes to prevent slamming.



Fig. 111: Willsborough Mansions' passage façade with its variety of gates, front doors, burglar guards and safety bars.

An extraordinarily high number of flats (39 in number) had no burglar guards on any of their windows. Five of these were on the first floor, and the owners were prohibited from fitting them because of heritage codes (Althea Court, Sandringham) or felt it was too visible, or too difficult for burglars to climb.

Overlooking Crieff Place, **Tim** (79) was the only person below the fourth floor with no burglar guards. His old timber casement windows were rickety, but he didn't worry: the flat, rented from his stepdaughter who lived elsewhere on the Beachfront, was piled high with books, papers and music… not things he considered worth stealing. The other 62 respondents

all had burglar proofing on at least their passage windows. As not even the newest blocks had burglar guards when they were built, they were all installed at different times to suit different tastes, resulting in an odd mish-mash of patterns and styles.

Two different respondents on the 9th floor of Port O Durban reported installing burglar guards recently after their duplex units were broken into via first floor back windows. Reached only by climbing through a tiny window in the back stairwell and jumping over a sheer drop, the perpetrator, they said, was a child.

Only six flats in the sample had burglar guards on their exterior opening windows, two of which, it surfaced, were to keep children in—not criminals out. On the 11th floor, **Raksha** (43) had fitted a Trellidor over the living room sliding windows before their first child was born, and **Zuhayl** (35) on the 13th floor had riveted clear Perspex strips across the bottom openers of their sea-facing aluminium windows to deter their young sons.

Single mother **Radhiya** (49) recounted the event that led her to fix removable child-proofing to her sliding 5th floor windows in Cumberland: "I was in the kitchen making sandwiches, and heard my nephew saying 'Radhi masi, Radhi masi...', then the voice went up, and I turned and saw my little one had pushed this chair up to here and his hands and legs were on that window ledge… he was what, nine months old? I just froze, I thought if I run I might scare him, I said *'Yaseen!'* and out of fear he came back in. I didn't sleep that night. We could have lost him."

Temporary barriers are a good solution for babies and toddlers who are not used to heights, while those who grow up in high-rise buildings, like **Sumaya** in Port O Durban, are best trained from very young to stay away from sheer drops.

The previous owner of **Zama**'s flat on the 9th floor of Carillon had fitted burglar guards on all the opening windows, which she left up, and even added a deadbolt to the heavily-secured front door "just in case of *izikebengu* [criminals]". Only two flats had alarm systems. During their renovation, **Sarah** in San Remo had installed a full security system which they had never used, and the subscription for the alarm in **Mpumi**'s 5th floor Rydal Mount flat had long lapsed. I was unsure how armed guard response would even work in such a dense urban environment, but could see why Mpumi felt the need. She'd also fitted a Trellidor at the entrance. "We're not allowed to put up burglar guards, it's an old building, but I would if I could. Even though they have CCTV now, humans make errors. And look, there's that [the podium], and there are ledges below all the windows… it's easy to climb up here!" she insisted.

I attribute these wide differences in security concerns and behaviours to three factors: the respondent's individual character and beliefs, past encounters with crime, and the safety of their building and immediate vicinity. Overall, this research illustrates that the urban residential high-rise, possibly more so than any other housing form on offer in this high-crime society, can provide a safe environment without the layers of visible fortification which so often cut buildings and residents off from their surrounds.

Parking for the Unit

One of the biggest challenges for high-density urban housing in a car-focused society like South Africa is to secure safe parking on or near the property with the limited space available. When these high-rise buildings were constructed, car ownership was significantly lower. A few older buildings such as Ottawa Court were designed with no on-site parking at all, and have never added any. A handful of later buildings have at least one bay assigned to each unit.

Types of on-site parking include open air or undercover bays, basement or multi-storey car parks, and the lock-up garage. No distinction is made in this study between different types; what is relevant is that the vehicle is protected from theft and pilfering of parts.

Ownership of individual parking bays varies. Many are owned outright (ST), some assigned by exclusive use (SB) and a few owned and rented out by the Board. Those with no on-site bay can either rent in a nearby building, or park on the street. Car theft is rampant in the area, as is opportunistic theft of any item that can be resold. Insurance premiums, already high in Durban, soar when one parks in the street overnight, and a vehicle left outside in this environment will rapidly deteriorate.

Despite these factors, car ownership on the Beachfront is high, at 70%. Seventy flats had between one and three cars each associated with them and the other 31 had none, distributed across the five zones (Fig. 163) as follows:

	Part of Beachfront				
	1 North Beach	2 Old North Beach	3 South Beach Central	4 South Beach Addington	5 South Beach uShaka
Respondents	47	8	24	4	18
Cars	56	10	13	2	14
Cars per Household	**1.2**	**1.3**	**0.5**	**0.5**	**0.8**

The average North Beach household owned 1.25 cars: the nine units with no associated car and 30 with one car were balanced by the 12 with two cars and four with three each. In South Beach, car ownership was less than half that, averaging 0.6 cars per unit, which reflects the income distribution across the study area. Where capital concentrates, so do private vehicles. Of the total 95 cars recorded in this study, 66 were securely parked inside the building where the owner lived, but less than half of these bays (30 in number) were owned by their users. Thirteen of the 95

cars were parked securely in a nearby building, and the remaining 16 cars parked in the street.

For **Senzo**, whose SUV lived in the parkade that joins the three buildings making up Bencorrum, secure parking was a priority: "I wouldn't have bought the flat if it had no parking, it's like leaving your money out in the road, they *will* break into or steal it." The other 36 bays were rented by the users from their landlord, a neighbour, or in a few cases, the Board. In three buildings where there was a mismatch between supply and demand, the supervisor acted as a middleman, connecting empty bays with those seeking them. In one case, all rented bays were managed in this way, and the Board took a commission from the fixed price of R300/month. Otherwise a free market, parking prices were not necessarily linked to the specific area, building, or level of enclosure, and a great disparity was recorded.

The best value on-site rental parking in the dataset was Shanti's lock-up garage in San Remo, which housed a car and a motorbike and cost R250/month. The most expensive had been won 'on tender' by an owner-occupier two blocks down. The 16-storey, 66-unit Montezuma has only four covered ground-floor bays, which are auctioned off annually with a reserve price of R10 000/bay. My subject, who'd had the same parking for four years running, must've paid upwards of R1000/month. The highest fixed price was not far behind: R900/month for a parking bay in Willsborough Mansions' basement.

Many buildings had long waiting lists for rental parking and I heard from people who'd been on the list for years. I also heard from newcomers who'd had two on-site bays included in their rent from day one. The average estimated rent for an on-site parking bay was R390/ month.

In North Beach there are three off-site possibilities for parking: the Refuel petrol station in Playfair Rd (R525/mo), Eden Crescent retirement home (R435/mo), and The Oceanic Hotel and Suites (R300 to R350/mo). All three parkades were fully occupied at time of study, but I was told waiting lists were short due to the relatively high turnover of renters in the area.

Prudence (56) in Courtleigh Heights, who stayed on the Beachfront "because I'm close to my family and it's well-connected to everywhere, as I don't have a vehicle" lived with her mother (77) who still drove. Her car was parked only a few hundred metres away at Eden Crescent, but the route home cut through Carpendale Park. Prudence wasn't worried. "Mom walks through the park at night. You cannot live in fear. I come home from dancing at 9pm and have never ever had a bad experience." While not a problem in this outlying case, the physical distance between parking and home was hardly ideal, especially for women and families with young children. The only other lady in North Beach who parked off-site made sure she was home before dark, and in two-car families with one on-site bay, the woman, in all cases but one, was the one who used it.

Near Addington, an owner in Carillon parked her car in the shaded lot of St Giles charity next door—the best value off-site arrangement in the dataset at R200/month.

South Beach Central and Addington had the lowest rate of car ownership amongst those interviewed, and only three cars were parked off-site. One belonged to a tenant in Ottawa Court and was kept at Coastlands Hotel (R370/mo), and a couple in Fairhaven parked one car next door at 10 South Apartments (R600/mo) and the other at work in town. Two owner-occupiers had previously rented bays from others in their block, but struggled to navigate into the convoluted spaces and elected to park outside instead. Since then, **Alex**'s Volvo outside Groote Schuur had fared quite well, but **Laila**'s car outside Marine Sands had lost "hubcaps, wipers, a battery, fog lamps and goodness knows what else".

Street parkers all had war stories to recount, and four respondents had had a car stolen. The availability of street parking close to the building was a real problem in certain areas.

Yasmin, who herself parked safely inside Yarningdale, had invented an elaborate car-swapping technique for her visitors who felt unsafe parking too far away, as they were followed and harassed by beggars. The situation improved, she said, when the building hired a night watchman to be stationed outside. Here, we see how human intervention is leveraged to secure self and property more effectively than barriers or alarms.

DUT's Baltimore Res had no parking, and House Mam' **Neli** (40) had to park in the street in a busy part of South Beach where vagrancy and crime were rampant. "I depend on the *paras* for security," she explained. "Once I forgot to lock the car with my laptop and phone inside, and they slept in the car to keep it safe. Everything was there in the morning; they saved my life. [ ] It's only possible to keep a car safe here through relationships, you have to make sure the *paras* know it's yours, for example by asking them to wash it, and you must always give [pay] them something."

So much more than a mode of transport, many middle-class South Africans would be lost without their car. This research accounts for the arrangements made by car-owning households on the Beachfront, but not for those who left the area or decided against moving here altogether due to the parking situation. Many prospective buyers, I was told, will not invest in a unit that doesn't have at least one secure bay, and prospective tenants may be awestruck when they view a flat, but lose interest immediately when they find out they must park outside.

Internationally, car ownership is declining for economic reasons as public transport networks improve and individuals reduce their carbon footprints, making car-free developments such as The Commons in Melbourne and Kalkbreite in Zürich feasible. In South Africa, however, there is no sign of car ownership declining. While I believe the North Beach statistics are slightly inflated due to 3-car households—all older couples with one or more residual vehicles that weren't driven regularly—the fact remains that in the absence of a safe, reliable public transport network, a middle-class, two-parent family with school-going children is likely to need two cars. But if we stretch ourselves to imagine more socio-economically diverse neighbourhoods where wealth—and so private vehicles—are more evenly distributed across city space, and where the street outside one's building, instead of a deserted, dangerous place to park becomes a safe, lively and pleasant extension of semi-public space that supports various types of mobility, a whole range of future possibilities opens up.

Conclusions

With so many kinds of people happy to call the Beachfront home, a strong sense of place exists here. Most of these blocks were built for smaller households and don't cater for the families that now make up a large portion of residents, indicating a need for more larger flats. A parallel revival of the bachelor as a flat type would balance this out and mean a full range of unit sizes could be offered within a single new development, making urban living more attractive to some, and at the same time more accessible to others. The flexibility of a half bedroom is shown to add much functionality to a home, and the inclusion of this room type as a design feature in addition to (not instead of) a balcony, is proposed.

In terms of occupation, a wide range of indoor densities is shown to result from the interplay between a flat-dweller's financial means, personal and cultural preferences, the unit's physical parameters, and the building's occupancy limits. Data reveals that many Beachfront flats are comfortably occupied much more intensely than originally intended. Particularly smaller units that permit four or five inhabitants make living in this well-located and -provisioned part of the city affordable to a whole segment of the population, including lower-income and migrant families and students. In the interests of spatial justice, the inclusion of these groups in new urban housing models is essential—but there must be a balance. Occupancy limits for new buildings need intelligent revision in line with modern lifestyles in order to better utilise space than is currently done in some (mainly northern) parts of the study area, where rules still enforce lower densities, and at the same time, protect new structures from overloading.

Accepting that flat-dwellers, including those in the middle class, will seek to occupy flats at higher densities for economic reasons, and writing the flexibility to do so into new housing, will be key to attracting and retaining households with differing incomes to live under the same roof. Social mobility involves enabling middle-class households in lower tiers to move from vulnerable to stable status and up. We have already seen evidence that a residential building can play a part in this.

In terms of tenure, this research points to a growing disparity between those who own and live in their units and those who rent. Falling outside the mainstream were those, typically higher earners, who do not aspire to owning property yet still want to live in centrally located, high-quality collective housing with the opportunity to settle, belong to a community, and have a garden or pet. The other, much larger group consists mostly of middle-income families who rent for fiscal reasons, are happy in the city, and (in addition to all of the above) seek to own property but cannot find or afford a big enough flat in the area, and are willing to move to the suburbs to fulfil this aspiration. Catering for these two groups will entail providing an entirely new range of integrated, mid-level urban housing options. So far, possibly the biggest obstacle identified in this regard is the continued use of the dwelling unit as a commodity to generate private profit—the absent landlords who, as Henry George predicted, largely dictate the pace of urbanism here.

Unless the mechanisms by which properties are bought, sold and rented locally are revisited with a view to restricting the upper end of the market and opening up the lower, it is clear that the chasm between the shrinking property-owning class and everyone else will continue to grow. Much the same applies to residential parking space: steps must be taken to prevent its accrual in private hands, manage it in more transparent ways, better predict localised demand, and develop future-proof strategies for mobility.

Finally, in terms of security, the residential high-rise is shown to perform excellently in this context. By alleviating much of the fear and mistrust that can prevent us from engaging across lines of difference, the safety that stems from two distinct qualities of this housing form—its height (verticality) and the mutual proximity of residents (density)—might well be the key to enabling socio-economically diverse communities to flourish.

This chapter has described how affordability, tenure and human relationships together dictate who *is able* and who *desires* to live in a particular flat. The notion of choice with respect to a home that fulfils not just basic needs but aspirations and the equal right to participate in the production of city space must, I believe, form the cornerstone of any normative work around spatially just housing.

The next chapter explores the experience of dwelling in one of these Beachfront flats, how it changes with the container's vertical and horizontal placement, and how the size, configuration and fit-out of rooms affect usage, comfort and performance. These will inform design parameters for the Veryicolapa's component cells.

Chapter 8:

A Shelter for Daydreams

Findings – Unit/ 2

> "'[T]he chief benefit of the house [is that] the house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace,' writes Bachelard. But even more, an architectural space frames, halts, strengthens and focuses our thoughts, and prevents them from getting lost. We can dream and sense our being outdoors, but we need the architectural geometry of a room to think clearly."
> (Pallasmaa 2012: 44-5)

One aim of this study was to capture and somehow quantify the total experience of dwelling in a high-rise flat, something very few past studies have examined, finds Gifford (2007). Both Pallasmaa and Bachelard acknowledge above how architectural space, particularly that of the home, impacts the way we think and see ourselves in relation to the past, the future, other people, and society at large. From the empirical data presented in previous chapters, we have a good idea of who lives on the Beachfront and the type of physical containers they occupy; now we will look at how spaces are inhabited from day to day (perceived space) and passively experienced in terms of symbolism and meaning assigned by their users (lived space). Aiming to establish how raw sensory data can be manipulated to provide more concrete guidance for future architectural endeavours, an enormous amount of information was collected from seven questions:

- Six questions asked the subject for their favourite and least-favourite things at each spatial level (unit/building/neighbourhood)
- One long question, Phenomenology, asked people to think of all stimuli—positive and negative—that they associated with their living environment across five senses, here expressed as Sight, Sound, Smell, Touch and Emotion

The information was analysed via multiple matrices to understand what is important to the modern Beachfront flat-dweller, and which design solutions work better or are preferred by a random user sample.

This chapter is organised in sections, the first of which outlines the most common themes arising at unit level. The next three are concerned with spatial configurations, linking sensory data with space, first in terms of a unit's position in the building (height above ground and orientation with respect to cardinal points) then in relation to its plan layout, where the size and placement of individual rooms is studied. Working through these user reviews of space, one aim was to establish which building materials and components might be better suited in this application than others.

Experiencing the Dwelling

Architecture, says Pallasmaa, "is not experienced as a collection of isolated visual pictures, but in its fully embodied material and spiritual presence. [ ] Images of one sensory realm feed further imagery in another modality. Images of presence give rise to images of memory, imagination and dream" (ibid).

Across all five senses, unpleasant experiences arising inside the home were limited, but multiplied significantly as the focus shifted from the home to the building and out into the neighbourhood. This was most pronounced when it came to emotions, where over 200 mentions of positive feelings engendered by the flat far outweighed the ten negative ones. The myriad descriptors for positive feelings were grouped together into themes that speak in a more nuanced way about the relationship between people and their space.

The first four themes, together comprising over half of the positive emotions, were: joy or pure happiness, comfort or contentment, a homeliness characterised by belonging or familiarity, and a feeling of safety. The next two themes alluded to the relief or relaxation experienced when one gets home after a busy day, grouped into those words with more of a spatial connotation (being away or physically distant from something), and those that refer to a mental state of being 'at ease'.

Thirteen people felt love for their flat, and eleven, gratitude for where they lived. The higher up and better their views, the more likely residents were to say something like, "Every day I feel like the luckiest person alive… we live in paradise!"

With few exceptions, a deep-seated understanding of privilege was apparent. Empathy across socio-economic lines was observed to be strong, and at least half the participants were involved in either direct (one-to-one) charity or some sort of community service. This bodes well for the future of integrated housing in a place as diverse as the Beachfront, where the wealthy co-exist in close spatial proximity to the vulnerable poor.

Other shared positive emotions included feeling at peace, connected, and in some way excited or alive.

Positive Emotion	Mentions
Happiness/joy	29
Content/comfortable	28
Homely/belonging/familiarity	25
Safe	20
Escape/relief/sanctuary/free	15
Relaxed/worry-free/calm/chilled	15
Affection/attachment/love	13
Lucky/privileged/blessed/thankful/grateful	11
Peace/tranquility	7
Connected (activity, work, community)	7
Excited/alive/refreshed	6
All good	5
Good memories	5
Independent/private/anonymity	4
Considered/supported/cared for/respected	4
Inspired	2
Good vibes/energy	2
Hopeful (sea view)	1
Proud	1

In terms of negative emotions, three respondents had sad memories associated with their flat, as someone they loved had died there. Another three felt some frustration because of conflict with their landlord or management. While useful to reinforce the findings on satisfaction, data on emotions did not translate easily into spatial terms, whereas data from the four other senses (sight, sound, smell, touch) was easier to interpret into design recommendations.

Together, the following four themes collate the phenomenological data to paint a general picture of how it feels to dwell on the Beachfront.

Views

The two aspects interviewees liked most about their flats, mentioned by over a third of the sample each, were the spaciousness and the views. Of 184 positive sights mentioned at unit level, 170 were visible from a flat's windows. In contrast, of only ten negative sights recorded, seven were also related to views—either that there was no view, or occupants looked out onto something like a parking lot or adjacent building.

Every person fortunate enough to have a full or partial sea view listed this as the first positive sight, which tells us that just under 60% of the units surveyed had some form of sea view. Those with another view of the manmade environment (city, suburbs, streets) or green nature (dune vegetation, parks, trees) almost always listed these, as did those who overlooked the working harbour.

A high proportion of the positive emotions were linked to a unit's outlook; some found it therapeutic and others were inspired to be more active by watching people exercise. The harbour view, only visible from certain South Beach buildings, elicited particularly strong emotional responses, probably because the 24-hour spectacle offers everything that people like to look at, but also more symbolically speaks of a working local economy and Durban's connection to the rest of the world. Englishwoman **Eleanor** (65) in Merion Court was very fond of her "boats"—car carriers, passenger and container ships loading and unloading—and **Thandeka** in Hawaii loved to watch the cruise liners, which were like "giant moving hotels". Add to this the two young ladies whose harbour views inspired them to study logistics, and we might conclude that the outlook from a flat can affect us quite profoundly. Data points to the fact that the view from an elevated flat window can have an overwhelmingly positive effect on inhabitants, most notably when it includes nature. Here, our tendency to privilege sight over all other senses (Pallasmaa 2012: 29) is used advantageously to bring the outside right into the home. In a flat, the comfort of having others nearby is balanced by being able to close a door, retreat into private space and be alone with one's slice of the world—not a luxury afforded to many low-income city-dwellers. I propose that the view, a free natural resource shown to deliver an emancipatory effect, is used more imaginatively, and effectively 'redistributed' by architecture.

Sea Air

The sea breeze, this neighbourhood's most powerful climatic force, is also its most destructive. Salt-laden sea air containing ocean bacteria moves onshore, picking up environmental pollutants along the way and turning into a sticky, brown residue (McCutcheon 2019). Where windows in a sea-facing unit are left open, horizontal hard surfaces are always sticky, and areas near exhaust fumes, restaurant extractors, incinerators or construction dust need to be wiped down daily. At humid, windy times of year, soft surfaces such as upholstery and linen constantly feel damp. Severity reduces with distance from the shore, and is moderated by the height and orientation of each flat, but no building in the study area is immune.

Only one respondent did not have this problem: **Lwandle** (29), who'd lived in 14-storey Carillon for 20 years, in four different flats. The previous three, she said, had "lots of mould, damp and funky stuff" but since moving to the 7th floor on the southeast corner, the problem had vanished, as their unit was well shielded from the sea by Highspray, the tail end of a wall of tall buildings. Around a third of the sample mentioned corrosive sea air as a negative tactile sensation, and in the flats, nearly all aluminium windows showed signs of corrosion, even those that looked new. As discussed, metal furniture and equipment suffer a dismal fate in this area, as do certain clothes and accessories. One man living a city block back from the frontline was determined not to let the sea air destroy his apparel, so he used two

disposable portable dehumidifiers which he said worked well.

An oft-mentioned negative side-effect of the sea air, both visual and tactile, was dirty windows. This was worst in sea-facing flats where even if windows were cleaned fortnightly, respondents said they were murky again within a day or two. A long-time Beachfront resident in Maldonado confirmed that it is important to wash apartment windows regularly, otherwise they corrode twice as fast. This is not unreasonable to expect in a well-managed block, only high-rise windows in this context are cleaned by staff from the inside, and many absentee owners residing elsewhere allow no-one to enter when they aren't there. "I'd be like that" my interviewee said unabashedly. This is one example where a lack of trust or co-operation between stakeholders acts to the long-term detriment of the building.

Another negative effect of the sea breeze is peeling, flaking interior wall paint around windows. In sea-facing flats, interior PVA won't last six months before it begins to bubble and delaminate, and when the wind picks up, a shower of 'snowflakes' is blown inside.

Higher up, large panes of glass deflect visibly in strong wind. If casement or top-hung windows are left open and are not sturdily framed and restrained, they can have their glass blown out or be ripped off their hinges—something supervisors said happened quite regularly. Strong wind made several people unsettled, and many reported closing windows a lot to exclude wind-driven dirt and prevent damage.

The info gathered on sea air and its effects reminds us of the need to employ building materials that can withstand local conditions and anticipated future change, and the need for stringent, regular maintenance of openings, managed in a centralised way that cannot be opted-out of, to ensure quality control and protect the collective asset.

It also suggests ways in which window design in new high-rises might be improved: reintroducing hardwood as a material; reducing the size of windows and individual glass panes; recessing windows from exposed outer façades; returning external walls on either side of openings; and building in restrictors. Residents should be able to open windows in different configurations and to different extents depending on wind speed and direction, as blocking a unit's primary airflow is bound to affect interior comfort levels.

Microclimate

A quarter of respondents in this study loved the fact that their flat was light, open and airy or had a good microclimate. Moreover, nearly 90% of the 'positive tactility' mentions pertained in some way to the flat's microclimate, which is a function of two things: temperature and ventilation.

Abdullah, a long-time Beachfront resident born and raised in Clairwood, was perplexed by how cold he felt in his new south-facing bachelor in Floradoone.

"With climate change, this year we had a very long winter. Since the time I was a little boy until now when I'm fifty, I think this was one of the coldest winters we've had. I don't like the heat, so for all these years, at both Marine Towers and The Oceanic, I'd sleep with the aircon on the whole night. My wife would complain. But here it was actually freezing, for the first time I had to wear long pyjamas and use a double duvet!"

I reassured him it was not just climate change to blame: his south-facing unit in a doughnut-shaped 11-storey building was shaded by interior walkways and received no sunlight at all to any walls or surfaces. A space like this, I explained, will never warm up.

Overall, around one in eight respondents said their flat or part of it was too hot or stuffy in summer, confirming that units were generally well-designed in this regard. This is supported by the fact that less than 20% of units visited had air conditioning, and most occupants said they rarely or never used it. One owner-occupier with a west-facing bedroom was annoyed that rules prohibited her from installing a split aircon unit. This was the case for the street-facing façades of most buildings, as the condensers were deemed unsightly. Only one flat in the dataset was fully air-conditioned all the time—likely the owner's initiative so the windows stayed closed to protect his assets, and not the choice of his caretaker nephew, who paid over R10K/month for electricity.

Ceiling fans were rarer than expected, and again, used infrequently—only in mid-summer, and when windows had to be closed in strong winds. Standing fans were more popular, likely because these user-owned appliances can be moved around and directed to supplement, enhance or force existing natural ventilation which, this research confirms, is in no short supply here. Stuffy, hot rooms or zones in a flat usually resulted from interior openings that did not permit air to circulate around the whole unit.

Together, the sea breeze and this housing form's verticality create the ideal conditions to naturally ventilate and cool flats, but modifications made over time (enclosing balconies, replacing steel and timber casement windows with large aluminium sliders, and sealing up fanlights) mean that very few existing units now perform optimally.

Pests

Interviewees were not asked specifically about pests, yet these were often mentioned. A negative stimulus at both flat and building level, pests were reported less by those residing in more expensive, sparsely-populated buildings that stood separate from commercial areas, and more by those living in densely-populated buildings with shops, restaurants or takeaways on-site or next door. Cockroaches are a

common occurrence in high-rises, as the ducts and drains create networks connecting units. They nest in cavities in cupboards and skirtings, and the distinct, earthy odour of their droppings will persist unless the unit is stripped to a shell and redone. Fumigating an individual flat makes little impact, as **Zaid** discovered on moving into an Ocean Way bachelor with his pregnant partner.

"All the flats originally had these old-fashioned BICs with skirting around them, [this unit] was infested with cockroaches, borers, all sorts! It's not a good environment for a baby, you know when they start to crawl they're going to pick things up and eat them… [ ] And if you don't keep the flat clean the cockroaches will be running all over; It also depends on your neighbours, whether they take the trash out every night and keep their place clean. [ ] It took us six months to get rid of all the little ones, [ ] we bought about ten bombs—*and* powders *and* gels—and left it for a whole week, and the cockroaches didn't come back for like a year. The big ones still fly in the window though, [ ]… we even get some Madagascar hissing cockroaches!"

Of the many varieties found here, the most populous are the small ones (under 15mm), called the German cockroach, and they nest indiscriminately: in printers, coffee machines, fridges, even microwaves. Cockroaches are not dirty, but they spread dirt from one area to another and their droppings contain high levels of allergens, which affect asthma and allergy sufferers. Aside from any direct health threat, there is a certain mental strain that comes from trying repeatedly to expel cockroaches from one's home and failing. When speaking about this, interviewees typically expressed a combination of frustration and disgust, and for some, it clearly impacted negatively upon their QoL.

While worse in hot, humid climates, the problem is not Durban-specific: The American College of Allergy, Asthma and Immunology claims that between 78% and 98% of urban homes in the US contain cockroach allergens *(www.acaai.org)*. Only one building here, I was told, did not have cockroaches: Key West in North Beach. I cannot generalise based on one experience, but it is notable that this is the only building in the dataset that, bar its circulation cores, is lifted entirely off the ground on *pilotis*.

Only one flat on the 8th floor of Yarningdale had mosquito netting fitted over the openings. Flies were uncommon, and found mainly on lower floors where flats were near bin areas or rubbish skips. In Baltimore Res, the flies on lower levels, I was told, came from the feral cats living under the building. Without the means to control pests themselves and with DUT's contract exterminator reportedly making little difference, the students had learned to live with cockroaches and flies, but were upset by their ongoing struggle with bedbugs, which were blamed on the old mattresses in the furnished rooms.

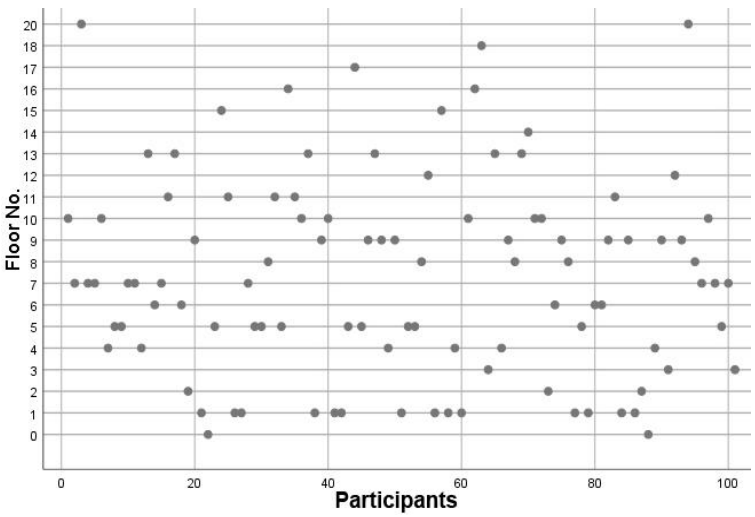
Lastly, several respondents mentioned the damage caused by wood borers to timber furniture and components, and one man could not walk barefoot in his flat as the old floorboards were hollow and would splinter.

This research confirms that pests are found all over the study area, and the extent to which they are problematic is mainly a function of resident behaviour inside a unit, limited by the effectiveness of building scale pest control. Tenure aside, the more involved residents were in running their building, the less likely they were to have an infestation, which suggests that a cohesive, informed, and empowered resident body can deliver added benefits for all parties.

In the social housing and commercial rental blocks, no pests were mentioned. This could indicate several things: that property owners invested heavily in pest control (unlikely), that pests were a minor irritation compared to other issues (possible), or that those interviewed were less affected or had managed to eradicate pests because of their flat's exact position in the building (probable). On this note, a unit's 3D placement within the building envelope was found to be the primary moderator of the dwelling experience.

Height Above the Ground

Gifford (2007), who encourages further enquiry into the effects of floor height on the overall experience of dwelling in tall buildings, ponders whether those on lower floors "experience the many floors above them as a sort of crushing burden", or conversely if those living at height feel "on top of the world". One aim of this research was to explore the sensory impact of floor level to establish if potential exists to multiply positive or ameliorate negative outcomes in new developments. Several surveyed buildings were thirteen storeys or less so fewer respondents were recorded above here, but overall the sample had an even spread with at least one flat visited on each floor except the 19th.



Based on previous studies (Kim 1997; Gifford 2007), scholars concluded that the floor level of a unit alone made little or no difference to occupant satisfaction, nor could vertical height be proven to produce any particular negative side effects. My research corroborates these findings. Even with a small dataset, one might expect a vague trend to arise, but the randomness of results is captured below.

Satisfaction with Living Environment	
Mean Score	Floor Numbers
6/10	2nd
7/10	9th, 14th and 17th
8/10	G, 4th, 5th, 7th, 10th, 11th ,12th and 20th
9/10	1st, 3rd, 6th, 8th, 13th, 15th and 16th
10/10	18th

Derived from 101 diverse respondents in 51 differently designed high-rises, this implies both advantages and disadvantages to living further off the ground, and that these play out differently depending on the situation. Sensory data also supports Gifford's (2007) finding that the experience of verticality is moderated by other factors, two of which appeared more influential in this context: the building's location in the urban fabric, and the lifestyle/life stage of inhabitants. To interpret experiential findings into more concrete spatial guidelines, flats were grouped into horizontal bands that produced a similar experience of dwelling.

GROUND-FLOOR FLATS are rare in North Beach, and almost unheard of in busier South Beach. The exception is a dedicated supervisor's flat, often accessed off the foyer or office, with windows opening onto the street or a common area.

The main advantage of living on the ground floor is accessibility; ingress and egress is step-free and quick, which works well for the elderly, mobility-impaired, and those with young children who often have parcels, prams and kids to juggle. These residents are not affected by power outages or faulty machinery, as they don't rely on elevators—a key positive outweighed by many disadvantages.

Security-wise, ground-floor flats are most vulnerable to invasion and pilfering through open windows, which need to be burglar-guarded and lockable, and also most exposed to happenings right outside—people partying, arguing, fornicating and abluting—which has implications for all senses, and can take a mental toll on residents. Persistent beggars will approach ground-floor windows at any time, and flats near the entrance are exposed to people coming and going, and doors or gates beeping and banging at all hours.

Privacy can likewise be an issue. The curtains of many street-facing ground-floor units remain closed all the time, as passers-by can see in, especially at night, and some constantly have other residents walking past their front door and passage windows to reach other units. These flats fare worst in the event of plumbing problems (blockages, leaks, and smells), and suffer most from pest infestations of all kinds.

Lastly, as they are situated low down in the building, these units receive little or no direct sunlight, and can be dark and cold. For all these reasons, ground-floor flats tend to rent and sell for around 10% less than options higher up.

LOW-LEVEL FLATS are those situated on the first, second and third floors of a high-rise. These units offer a 'mid-rise' urban dwelling experience characterised by an immediate relationship with their surrounds. At this height there is strong visual and aural connection with outside; one can clearly discern faces, chat with a friend on the pavement, or throw down keys. There is scope to keep an eye on a car parked in the street, and maybe identify or scare off a potential thief.

Being a little elevated, inhabitants of this band begin to hear and see more birds, and will enjoy better outlooks generally, although the density of buildings and natural features is still high, so views are often framed or obstructed. This band affords some shelter from weather: in protected areas, protruding balconies are a possibility, and balustrades can be lightweight to allow full visibility through. Occupants of lower floors depend less on the lift, as most can walk up or down three flights of stairs if necessary.

Disadvantages of living in this band pertain to sound and security, and reduce in severity with height off the ground.

Many buildings appear climbable via ledges, drainpipes or other architectural features up to a certain height, after which a fatal fall seems to deter most criminals. An interviewee who worked in security, carried a firearm, and resided high up in the building lived worry-free himself, but said he'd recommend burglar proofing all openings up to the 3rd floor. As discussed, few low-level flats had protected street-facing windows, probably the reason several people said they wouldn't feel safe living in this band. At the time of writing, Shorelands was to become the first North Beach building to secure their garden perimeter with anti-climb fencing, after three brazen theft attempts in rapid succession, all through ground and first floor windows while residents were home.

At these heights, flat-dwellers can hear low volume environmental sounds (passers-by talking, car engines and music) which can be invasive depending on the context. In busy areas where street activity starts around 4:30pm and goes on until late—or all night in unregulated bars, clubs and public spaces—this can become unbearable for respondents, especially if it affects their sleep. Here, one is more likely to witness violent behaviour (fighting, stabbing) or crime (mugging, car theft) at close range.

Lastly, these flats are at or below streetlight height and never get completely dark—the reason two respondents said they'd never live so low down.

MID-LEVEL FLATS are found on the 4th, 5th, 6th 7th and 8th floors of a block. For many, this band offered just the right balance between being connected (physically and visually) to the 'buzz' of city life, while being removed enough to enjoy the peace and better views. Looking out at this height, one can still discern faces enough to recognise a friend jogging or climbing out of a taxi. Outlooks are less likely to be obstructed, and distant views become more common.

Flats in this band are still acceptable to most residents who are afraid of heights, provided there is some façade articulation and not a sheer drop down from the window. At this height, low environmental noise blends with distant sounds (ocean waves, traffic) into a constant hum which many participants had grown very attached to, found soothing, and struggled to fall asleep without. Loud intermittent night noises—sirens, shouting, loud music, revving engines—can still wake residents from a dead sleep, but this happens less frequently than at lower levels. Birdsong is clear, and the flats are above the streetlights.

The floodlights found on the promenade and in parks are within this height band, but tend to be warmer, further away and less invasive, and serve as resting and roosting places for larger birds such as Egyptian geese and Hadeda ibises.

Most mid-level units were free of outside pests, except for some insect hotspots or where abundant plant life on a balcony or inside a flat supported its own ecosystem. Indoor pests become easier to eradicate the higher one goes, and the same applies to sewer smells.

While eight flights of stairs are a lot to climb in a blackout, most residents can still do so, though not with heavy or cumbersome things.

Mid-level flats, more exposed to the elements, suffer more from extreme weather conditions. At this height there is almost always air movement, which is great for ventilating flats but not for corrosion. Recessed or semi-recessed open balconies work well here, but they need better-protected, solid or semi-solid balustrades.

HIGH-LEVEL FLATS are classified here as those on the 9th to the 13th floors. Rising above much of the urban fabric, it is unusual for these units not to have views, and many boast 90-180° layered outlooks with varied mid-range and faraway scenery.

Up here, residents no longer feel a strong connection to what goes on at ground level, which is ideal for those who might live in the city for the convenience but don't appreciate constant activity. Respondents reported feeling very safe from home invasion at this height. Flats at these levels feel lighter and breezier, lending a sense of open spaciousness.

Gifford (2007) finds some evidence in old studies to suggest that the interiors of higher flats seem larger, but maybe only to women. One respondent to vocalise this was **Aamira** (41), who lived in a north-facing flat on the tenth floor of Montezuma, and spent much time going back and forth to the suburb where she did her shopping and her sons attended school. "I should really live in Overport, but I couldn't handle the claustrophobia of buildings upon buildings," she said, then with a sweeping gesture, "Here we are free… look! Cumberland is lower than us, Edenroc is lower than us…." Yet their indoor density, at 25m^2/person, was above average. This research repeatedly suggests that at this height, feelings of crowdedness begin to fade away, even for unrelated occupants living at densities as high as 9m^2/person.

While the sentiment was expressed by many more women than men in this random sample, the link to gender could still be coincidental, and would need testing with a controlled group living at similar heights.

Older studies from the '60s, '70s and '80s suggest that psychological distress including anxiety, depression and feelings of isolation and/or loneliness, worsen the higher one lives off the ground, particularly for women (Evans *et al.* 2003), but this phenomenon was not mentioned by a single interviewee regardless of their floor level or who they lived with.

Another positive quality is how forgiving upper levels are of vices, as both smells and sounds travel upwards—externally at least. The opposite is true of sound internally. Youngsters are more likely to smoke, play music louder and later, or have friends over, none of which is a problem within reason, but behaviours may clash with dissimilar lifestyles. It follows that conflict is less likely to occur if the pensioner, single mum with a new baby, and family that wakes up at 4am during Ramadan, have naturally selected to occupy a different part of the building to students and young professionals, for whom high-level flats are ideal.

Spaces up here are more conducive to learning and working from home, as they offer respite from the bustle and distractions down below. Importantly though, 13 storeys is a long way to climb when there is no lift, especially for frail or little legs, making these flats less suited to pensioners and young families.

By and large, the environmental sounds of the city blend into an ambient hum at this height. In an unexpected finding, noises emanating near the ground did not necessarily continue to diminish with height in this band; some frontline residents reported *worse* night noise from Beachfront revellers than those living in the band below, suggesting a sonic leapfrog effect is caused when onshore air collides with a wall of tall buildings.

Exposure to weather increases with height, and open balconies require more protection the further up

one goes. Casement, top-hung and pivot windows, whilst preferable for user control, are risky at this height as they can be ripped off their hinges by strong winds, causing damage and/or injury down below. Large pane sliding windows, by far the most prolific window type on the Beachfront, are useless at directing ventilation and keeping out wind-driven rain. They also get trickier to clean the higher up one goes. One solution is to use smaller windowpanes with sturdy restrictors, and while through draughts are sure to slam doors and blow things over occasionally, a competent inhabitant in a well-designed building who learns to 'operate' a flat to achieve the desired microclimate, is sure to enjoy the serenity of this band.

SKY-LEVEL FLATS are located on or above the fourteenth floor of a high-rise building. Where the outlook is unobstructed by surrounding buildings, almost always the case here, these homes feel like they float above the city, and a first-time visitor cannot help but be awestruck.

Late-20th century studies reached conflicting conclusions in studying the effects of floor level on residents. One found that mental health decreased with floor height, and another that those living higher up feel less crowded. One study showed a curvilinear relationship whereby residents of 12-storey buildings felt less crowded than those in either eight or 20-storey buildings, and yet another, that men's strain decreases with height while the opposite appears true for women (Gifford 2007). My research found that people quickly grow accustomed to living at height, but by all accounts, the elevation and sense of wonder never get tired, regardless of age (the youngest sky-dweller was 19 and the oldest 77), race or SES, and appears more pronounced for those from working-class backgrounds.

Kiara (35), who'd grown up in an outdoorsy middle-class family in suburban Richards Bay, had rented a 1.5-bed flat on the 16th floor of Yarningdale with her partner for nine years, and could not enthuse enough about her home.

"I wouldn't ever want to live on the ground in SA," the nature-lover told me. "Of course there are sacrifices, like not being able to have pets or a garden, but look what we have instead: the whole ocean as our front yard! Standing in the kitchen looking out, it feels like you're on a boat."

Like Gerald's flat in South Sands, the kitchen also had a view looking back over the city. The open plan living area into which the balcony had been absorbed was minimally furnished with light timber and white-painted pieces, and had layers of light curtains that could be drawn to control sun ingress to the breezy space. Various pots, trays and jars stood neatly around. "We grow things, sprout and ferment," Kiara explained, "and we also love DIY."

The overall effect of this modest indoor 'sky yard' was sublime, well deserving of her 10/10 satisfaction score.

Up north in Mangrove Beach Centre, **Violet's** 20th floor flat with its gorgeous view was her sanctuary (Fig. 92). She'd always liked heights, and had previously lived on the 34th floor of skyscraper 101 Victoria Embankment. After having her first son at age 16, Violet had moved to Durban into a small rental flat off the former Point Rd. "I was so poor I had to cook food on an upturned iron," she recalled. Urban flat living had given her the independence she desired, and her height above the ground had become synonymous with her rise out of poverty.

The biggest challenge for exposed sky-level flats is undoubtedly strong wind, and open balconies may no longer be practical. Up here, wind can cause a high-rise to sway noticeably, particularly a slab that is perpendicular to its direction, as happened when Yarningdale was buffered by 80km/h onshore winds during the October 2017 mega-storm. A high-rise building is designed to safely deflect, but for residents who don't know this—and for some who do—the sensation can be terrifying.

A similar swaying effect is caused by earthquakes, and although Durban sits in a low-risk zone, tremors do occur every so often. A quake's force emanates from the ground, so the most affected are the tallest buildings with the smallest footprint: vibrations that are imperceptible lower down can make the top of a narrow tower sway like a blade of grass.



Fig. 112: 133m Monte Blanc is Durban's tallest residential high-rise and third tallest building. Maldonado is visible centre left

One example is 40-storey Monte Blanc (1985) on the South Beach frontline, which has a small, stepped footprint and needle-like proportion that makes sky-level units, in this case the top two-thirds of the building, prone to deflect during strong winds or earthquakes. Notably, all the units originally had small,

recessed balconies, many of which have avoided enclosure, perhaps because their lightweight metal balustrades make them more difficult, costly and unsightly to enclose. This could also point to the value residents assign to a private open space, no matter how small or exposed. In contrast, Maldonado, with only three large flats per floor, changes in design from the 13th floor up, providing sky-level duplex units with unique double volume recessed balconies.

In a building with no penthouse, top floor flats can get very hot from the sun beating down on the roof slab. A couple who had lived in a flat on the top floor of Sahara Sands said its only flaw was the heat radiating from the roof slab, and in summer, the bedroom would only start to cool down at 2 or 3am.

Sky-level flats were found to suit the same users as the band below. In addition, expansive views make them attractive as second homes and short-term holiday lets. They rent and sell at a premium, meaning their economic potential should not be ignored. In constructing new high-rises, sky-level flats can be leveraged to cross-subsidise affordable units elsewhere in the building.

A PENTHOUSE is the uppermost inhabitable level of a high-rise. The term originally referred to a 'small house' on the roof with its footprint set back from the outer walls. The rooms found atop all high-rise buildings typically house elevator or aircon plant, and in residential ones, staff quarters, storage or shared facilities, but since their rise to popularity in 'Roaring '20s' New York, the term penthouse has become synonymous with a luxury apartment for the wealthy. Found in about a third of the blocks surveyed, the residential penthouse seems to be largely redundant today. Early in the research, two adjacent dissimilar North Beach penthouses (Shorelands and Las Vegas) were on the market. Both took over a year to sell, and did so for much less than asking price. This reflects a sluggish economy and also, I believe, the slow decline of the neighbourhood and the rise of newer, more luxurious offerings in seaside locations like Ballito that are perceived as cleaner and safer. In very few cases did penthouses appear to be occupied full-time. Where they had been added later, there was little design cohesion with the rest of the building and they often employed a different architectural language, one characterised by lightweight construction methods and discordant forms.

The residential penthouse of South Sands, unoccupied at the time, suffered near obliteration during the 2017 mega-storm. The roof was ripped off and hurled to the ground, and the interior filled up with water which seeped through the slab into the flats below. When I interviewed **Gerald** in his refurbished unit about eight months afterwards, his ceiling, electrics and porcelain floor tiles were still awaiting repair.

The practicality of an exclusive penthouse with an elevator that requires a special key to open directly into the unit is questionable where the market appetite for larger flats is driven by middle-class families seeking housing rather than elite holiday home buyers. A better approach is to provide larger, upmarket flats on the top levels, integrated into the building envelope as seen in Maldonado's duplexes, or conjoined and set back to form open roof terraces as seen in Solace Place in North Beach.



Fig. 113: Twin penthouses cap off this elegant edifice nicely.

Orientation

A unit's orientation with respect to sun, wind and rain is the primary dictator of its microclimate, and its views are determined by where and how it is orientated in relation to its surroundings—both factors that, as discussed, were found to exert considerable influence on the dwelling experience.

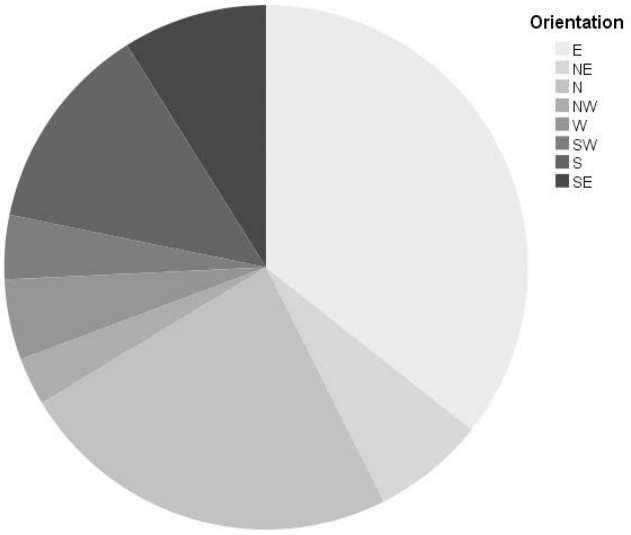
In the north of the study area, the street grid aligns with the cardinal points. Moving south, the coastline curves gently. By the time the grid meets the CBD it has rotated 10° counter-clockwise, and south of Rutherford Street it rotates a further 10°. Technically, buildings near Addington are orientated NNW-SSE, but for simplification purposes, all sea-facing units in this study are taken to face east.

Over a third (36%) of flats in the dataset fell into this category, and all buildings with east-facing road frontages took advantage of partial or full ocean views. When a slab was perpendicular to the coastline, there was usually a return wing housing a few flats at one or both ends, engaging with the street activity and capitalising on close-up, mid-range and faraway views.

Just under a quarter of flats surveyed faced north, typically those in buildings along wider east-west thoroughfares such as Somtseu Rd and South Beach

Ave, but also some smaller side roads or where a public space to the north provided green outlooks.

South-facing flats were third most numerous (13 in number) and occurred along street frontages where, like north-facers, they often revealed oblique sea views if one stood near the window. In at least two cases (Carillon, Wavecrest), buildings were almost certainly designed to respond to better views to the South.



Double-aspect corner flats were captured based on their primary intercardinal directions (NE, NW, SE, SW), so SW would indicate a unit with outlooks to the south and west. Next most popular were SE and NE orientations, with nine and seven occurrences respectively. Usually corner flats, but occasionally resulting from a rotated building footprint, these often had oblique sea views. West-facing units were least common, with only 12 W, SW and NW-facing units.

The range of apartment orientations found within a single building depends on its typology. Doughnut-shaped blocks (Shorelands, Floradoone, Belmont) are most versatile in this regard, as they offer dual-aspect corner flats as well as flats that face outwards in all directions. Broadly, the more unit orientations a block offered, the greater the variety of lifestyle preferences it supported.

Only three buildings had their footprints rotated relative to the street grid: Marine Sands, Tugela, and the tower addition of Grosvenor Court.

In slab buildings, all or most flats face the same way. End-of-line units in a slab typically return around the corners and often the FE stairs too, creating wings that close off the passages at either end. These wings can have outlooks on two or three sides, and are well-suited to larger flats, as Marine Towers shows (Fig.126). Where passages terminate in FE stairs on either end, there is sometimes a back-facing bachelor with multiple aspects that is accessed from a landing on each floor or half level.

Typology aside, I noted that very few of these high-rises respond in any way to solar orientation, and it is common to find an L- or U-shaped building with all-identical façades. Certain features like flush mirror glazing, which appeals to some for its modern aesthetic and the promise of air-conditioned interiors, cannot be justified in this context. Design approaches that reflect a worldview in which aesthetics and uniformity triumph over sustainability and practicality need to be updated.

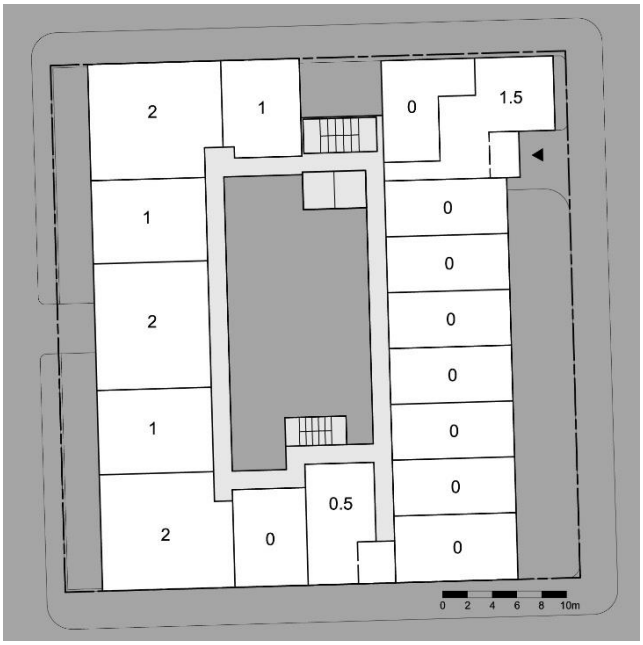


Fig. 114: In doughnut-shaped buildings like Shorelands, units face outwards in all directions.

Let us look briefly at what responding to solar orientation entails in this context:

EAST-FACING FLATS must contend with low angle morning sun, a challenge here because the same vertical shading devices that exclude low angle rays also block precious sea views. Luckily, morning sunlight is relatively weak, and arrives when it is welcome to warm up surfaces and spaces after the cool night. At sunrise, horizontal light will penetrate all the way to the back of a unit, and as the sun ascends northwards its footprint becomes shallower, disappearing from the flat by late morning.

Sun ingress depends on window placement, and the size and the depth of reveals. Heat gain depends on the amount, angle and strength of the rays that hit glazing and interior surfaces. While large, unshaded picture windows right on the façade are the norm in sea-facing flats, they are certainly not the most climatically responsive design solution.

NORTH-FACING APARTMENTS are most desirable in the southern hemisphere, as they receive sunlight most of the day, but it can be excluded without blocking views by placing horizontal ledges or overhangs above windows.

Sun altitude varies by as much as 45° at this latitude, so the depth of overhangs and recesses dictates exactly how far into the flat the sun will

penetrate, and can be adjusted to let direct rays reach glazing or interiors in winter but not in summer.

In north-facing units, large expanses of unprotected glazing can mean living with curtains closed for most of the year and render the place uninhabitable during summer. A recessed balcony is most useful in this orientation; it forms a protective overhang at the same time as creating a private open space that receives sunlight.



Fig. 115: The enclosed balconies of Willsborough Mansions' staggered North-facing units shade the living areas below.

SOUTH-FACING FLATS were found to work well for some users, as they stay cool year-round and, as they receive little or no direct sun, can have larger windows to maximise solar gain. Liveability is greatly increased when these units are higher up in the building to take advantage of views and sunlight falling on the back (entrance) walls. Rotating these flats in plan by as little as 5°, ideally eastwards, adds huge value by letting in early morning or late afternoon sunlight. Here, south-facing units in tall buildings are exposed to rain-bearing SW winds, and those on lower levels that receive less sun can be damp, dark, and chilly.

Recessed balconies still work in this orientation when they expose the surfaces of a building cut-out to sunlight it otherwise wouldn't receive, but staggered units, glazed sections that pop out from the façade and protruding balconies are preferable here, to capture the sun instead of excluding it.

WEST-FACING FLATS experience the greatest seasonal temperature variation, and perform the worst in this climate. They are most difficult to keep cool in summer due to relentless afternoon sun, which persists from noon until sunset. This invokes the 'greenhouse effect' whereby glass transmits shortwave radiation (incoming sunlight) and blocks longwave radiation (outgoing heat), causing warmth to build up in the space. This occurs wherever sun touches glass, but more so where solar rays meet glazing with a higher incident angle.

West-facing walls absorb afternoon sun, more so the darker they are, and radiate heat back into the flat well into the night. Conversely, the lateral position and low angle of weak, west, winter sun means it does little to warm up spaces, which can get cold at this time of year. In Durban, external vertical shading devices that can be user-adjusted from fully open to fully closed are ideal for west-facing units.

Lastly, these flats cannot rely on prevailing winds for ventilation, so their plans should not be too deep or compartmentalised, and their windows taller with opening sections low down to encourage air ingress, or high up to exhaust hot air.

By this point, the phenomenological data, supported by empirical data, points to some technical ways in which high-rise housing quality can be improved in this context. We are reminded of the strong correlation between housing quality, satisfaction, and human wellbeing by Evans *et al.* (2003), who find several studies evidencing that poor quality housing (of any form) causes psychological distress, regardless of whether the problem is pests, mould, a broken lift or structural damage. Gifford (2007) also points to the link between housing quality and SES: those with means can afford better quality accommodation in a nicer neighbourhood, and to repair or change things that don't work, whereas low and (in this context) middle-income households do not have this luxury. Good design itself does not cost more. In fact, it uses resources more efficiently to result in objects and spaces that perform better and last longer, so the right to the use value added by good architectural design, I argue, belongs to all.

Plan Layout

The previous chapter explored how Beachfront flats, large and small, are occupied at different densities. Now we will study the planning of units: what/how many rooms are provided, their size and shape, and how they fit together.

Planning was noted to have the single biggest impact on the way a dwelling functions, and one in five respondents felt it was their flat's best feature. Reasons included spaces that were correctly sized and located, had a good flow between them, or were flexible and could be used in different ways.

Almost as many felt their flat's planning was poor, for similar reasons: spaces were too compartmentalised or didn't flow well, were wrongly placed or sized, or were unpleasant or impractical due to an odd plan proportion or shape. A further fifth of the sample most appreciated one particular space or design feature in their flat—a large kitchen, an open balcony, parquet floors, or ample storage. We will now

study more unit plans, focusing on the different room types.

Bedrooms

This research challenged the traditional definition of a bedroom. If we believe a bedroom to be a space that is separated visually and aurally from other spaces, has a window to the outside and is used only for the purpose of sleeping, then over 40% of those interviewed for this study did not sleep in a bedroom. This is primarily due to the high number of bachelor and 'half-bedroom' flats (0.5 to 3.5 beds) surveyed, in which one or more people sleep in a space that is connected to another living area.

Where balconies on the outside of a bedroom are enclosed, it is unusual for that room's spatial quality not to diminish; either it becomes a little dark or a little stuffy, as the same devices that create privacy (full height curtains, screens, solid walls or panels) also inhibit the movement of light and air. Yet not a single interviewee complained about this, which suggests that the floor area and flexibility added by such a space outweighs any disadvantages. Several people preferred their sleeping space to be darker, and others liked that the internalised bedroom was quieter and more protected from outside noise.

In a north-facing 1.5-bed in Sahara Sands, a retired couple whose master bedroom had been partitioned with a ¾ height BIC said they migrated to the internalised space in summer, as it was the coolest room in the house (Fig. 123). Many living in 0.5-bed flats remarked that the separation of the enclosed balcony created the privacy for potentially conflicting activities to happen simultaneously (e.g. homework and TV), or the freedom to live in a way more suited to religious or cultural traditions.

For Zimbabwean **James**, who shared a 55m² half-bed in Sandringham with his wife and son, the separation by means of the original stained glass double door/window set was his favourite feature. Referring to the previous bachelor they shared with another family, he exclaimed: "No more cardboard walls! Now we have space, we can have visitors from home as is the African way: girls in one part, boys in the other." If he owned the flat, James said he'd brick up the divide and build a passage to the bedroom. He'd earlier reported an excellent microclimate in the unit, and I didn't have the heart to point out that his plan would put an end to this.

A similar strategy was adopted in **Philippe**'s duplex unit in Port O Durban (original layout Fig. 128) to give his dad a private bedroom and retain the half-bed office. The dividing wall was shifted, bricked up, and part of the bathroom co-opted to create a separate entrance. This served its purpose, but resulted in an internalised space that had to be artificially lit and ventilated.

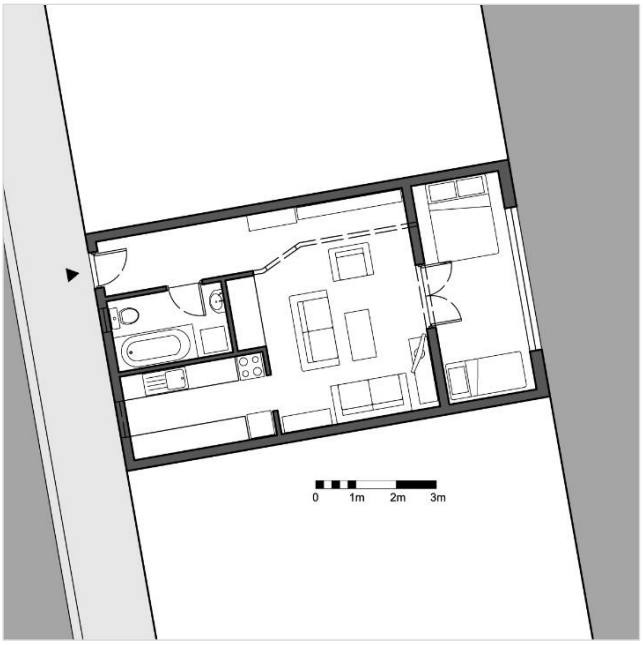


Fig. 116: James' half-bed with proposed changes dashed in.

In Wendover, the bachelor flats, which had a single brick wall splitting the front of the wide living area in two, behaved more like one- or 2-bed units. In **Neela**'s flat, the sleeping recess' fourth wall was a deep semi-open partition unit which doubled as shelving, with a curtain for a door, allowing plenty of light to reach the partly internalised living area.

Jill's larger south-facing bachelor, which doubled as a healing studio, had a small, enclosed balcony where she left the windows open. Its plan made the unit easy to divide up into three separate spaces: a living area and two sleeping places, one each for her and her 19-yr-old son. The drywall partition finished just short of the ceiling and both bedrooms were closed off with curtains, but the unit was private and well-ventilated enough to allow mother and son to co-habit within their means.

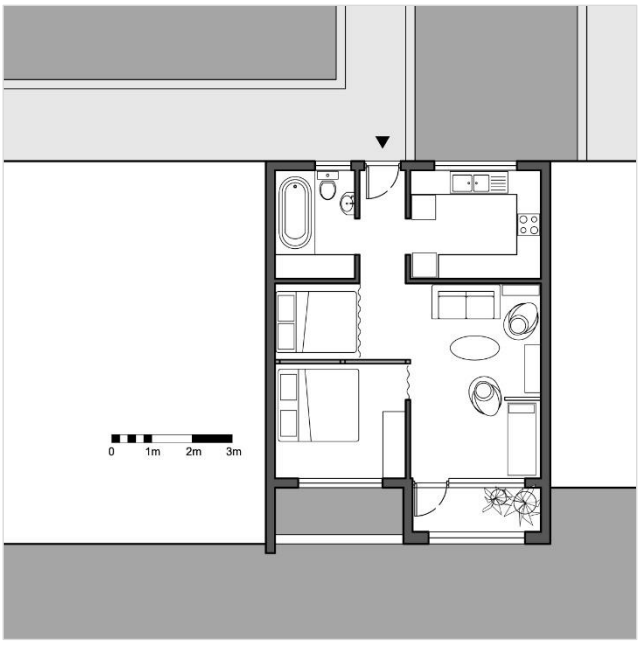


Fig. 117: Jill's Bachelor in Wendover performs like a 1.5-bed.

Creative ways to make use of all available indoor space were in no short supply, and a few even had 'pop-up' bedroom solutions.

One of these was **Roshini** (62) who lived in a 1.5-bed flat in Ottawa Court with her twin daughters (40), one of whom was in a wheelchair and the other lived there with her husband. The couple had the full bedroom and the daughter the half bedroom, which contained a single bed, industrial sewing table and three-quarter mattress propped upright. Each night, the matriarch would drag her bed out onto the spotless strip timber floors. "The lounge is my pad, I put the high-density foam mattress on the floor here. It's breezy and good for my back… *and* I get the best sleep."

Vukani, a student living in a north-facing 1.5-bed in the same building with his mother and aunt, had a similar strategy. Here, the sisters slept together in the full bedroom. The half bedroom was a tiny, internalised space that received light and air only from windows into other rooms, so it was used to store clothes and other items, one of which was a mattress Vukani would drag out into the large open lounge.

Also in Ottawa Court, **Zainab**'s family made the most of their spacious (72m^2) 1.5-bed unit a few floors below Roshini's. The couple had the main bedroom, their son (12) the half bedroom, and rather than sleep with her parents, their daughter (9) chose to create a sleeping space for herself in the generous hall. A draped folding table defined the space, and the butterflies and flower prints made it immediately clear whose spot this was. The children loved this arrangement, as they had their own 'bedroom wing' and could chat until they fell asleep on either side of the glass partition.



Fig. 118: These generously proportioned 1.5-bed flats in late-'40s Ottawa Court accommodate four people quite easily.

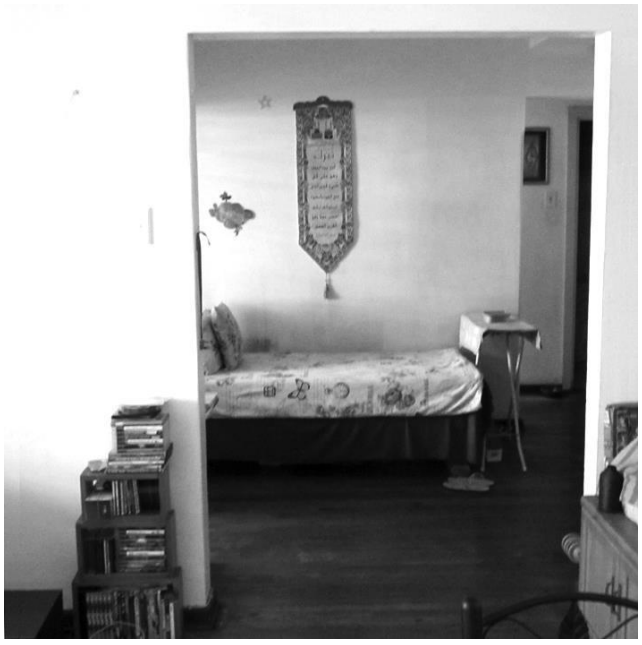


Fig. 119: The most innovative bedroom of them all.

Younger families inhabiting larger flats often accommodated the children together in one bedroom, using additional room(s) for other purposes.

Avid surfer **Zuhayl** (35) had secured a 3.5-bed sea-facing rental unit on Courtleigh Heights' top floor. The environmental scientist for the Ports Authority could check surf conditions from any of three east-facing rooms, and it was a short trip down in the goods lift with his surfboard and a jog to the best spot for a surf before or after work. The 140m^2 unit they'd called home for five years was more than big enough for Zuhayl, his wife and sons (8 and 6).



Fig. 120: This unit's deep plan (11.5m) has ample space for a family who only use two of the three bedrooms for sleeping.

The couple liked their sea-facing bedroom, although it needed air conditioning in summer. The boys slept in the second bedroom, and the third was a playroom. The enclosed balcony served as a

sunroom and shortcut between the two bedrooms—an arrangement young children enjoyed. The plan was simple and uncluttered, and the sparse timber furniture, mostly hand-me-downs, a bit dated. "We don't own, so haven't made much effort to improve," he explained. The interior was similarly plain, with crème ceramic floor tiles in the living areas, carpet in the bedrooms, crème walls and 1970s kitchen fittings, but this was more than reflected in the low rent, which included two on-site parking bays.

Kitchens

Twenty-two interviewees cited the kitchen as their least favourite thing about their flat. The biggest complaint was their small size (on average ± 6m^2), followed by the fact that they were disconnected from other spaces or that the fittings were outdated. This mismatch stems from the fact that when these buildings were built (1920s to '80s), lifestyles were very different and the preparation of food was kept out of sight. Today, the role of the kitchen in society has changed markedly. Open plan living has become the norm, with cooking, eating and sharing food found to play a key role in most Beachfront households.

An open plan permits communication and visual connection between the kitchen and living areas, and even for singletons, being able to maintain sight of a TV or a view of the outside or building-based activity makes one more inclined to cook. Further, prior to postmodern consumerism, people had a lot less stuff, and limited surface area and storage in old kitchens make it a struggle to find space, let alone plug points, for common countertop appliances. In an unrenovated Beachfront flat, one must almost always choose between a stove/oven and a washing machine; one can't have both.

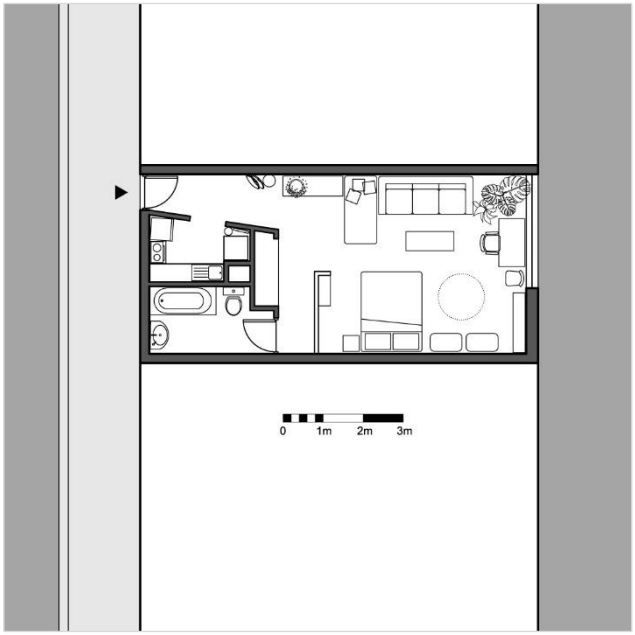


Fig. 121: These tiny kitchens (3.5m^2) accommodate either a full-size stove or a washing machine, plus a two-plate cooker.

The smallest kitchens in the dataset were in the Shorelands bachelors, but they worked surprisingly well due to their wedge shape and high-level storage above the cupboards. Few kitchens in smaller flats were over 6m^2 in floor area, and even two and 2.5-bed units seldom had kitchens bigger than 9m^2. In small separate kitchens, much space is wasted on things like door swings and awkward corner cupboards, so while all kitchens originally had doors, most had long been removed.

Comparing flat floor areas to kitchen sizes showed inconsistencies across the dataset, not just between buildings but even within a building. One unusually large kitchen in a Dunelands bachelor, for example, was around 8.5m^2, about the same as that in a 3-bed unit in Marine Towers. It felt like the kitchen, in many other cases, was an afterthought for designers.

Only Belmont, the last high-rise built at the West St node, reflects a different design ethos. Consisting almost entirely of larger flats, the doughnut-shaped residential tower which originally had ducted air conditioning throughout, had the largest kitchens in the dataset. Owner **Gilbert** explained how this affected their choice of block: "Completed in 1979, this building was beautiful, built for the White home style. I've been in many flats down here, and just this one block has a kitchen that is right for Indian folk… you know [we] like big kitchens? That's why I bought the place. [O]ther flats have got a tiny cubicle for a kitchen, two people can't even move in there! I have many friends on the Beachfront, have been into most flats, and I've never seen a kitchen as big as this!"



Fig. 122: Large kitchens are well-suited to 'Indian home style'.

The gentlest kitchen renovations involved replacing appliances, countertops, cupboards, and sometimes installing a second sink or prep bowl. Steel or Formica countertops were replaced with granite or similar, and

solid pine cupboards with laminated, metal or glass-fronted equivalents. In some cases, a hatch had been inserted to improve visual and physical connection between the kitchen and the dining/living areas—a good compromise to the costly exercise of breaking down entire walls, with the added advantage that the hatch can be closed as desired.

Open-planning kitchens had mostly been done by removing two walls and leaving the rest the same. More radical renovations entailed shifting rooms around entirely. **Cali** (51) had swapped the kitchen and second bedroom around, and open-planned the living areas of her 2.5-bed Willsborough Mansions flat some 14 years earlier. Sealed parquet floors ran throughout, appliances and custom cupboards lined up against the west wall, and the back kitchen wall finished in metallic mosaic tiles added a touch of luxury. The enclosed balcony was now a home office.



Fig. 123: Open plan living in Willsborough Mansions.

Retired grease technician **Peter** (74) had grown up in Greenwood Park suburb where his extended Indian family all had houses in the same road. After building their own house and raising a family, he and his wife moved to North Beach in 2004. At first they had bought a 2-bed unit in Sahara Sands, but a year prior to interview, in a move to downsize and become liquid, they sold the flat and moved to a rented 1.5-bed unit a few floors down. These units originally had a small separate kitchen, and the only bathroom was *en suite*—features other interviewees found impractical—but the new flat had been renovated, relocating the entrance to create a hallway off which a guest WC opened. A modern kitchen was fitted at one end of the open plan living area, the enclosed balcony incorporated into the other and a guest bedroom, accessed via a sliding door, created by dividing the master with a wardrobe.



Fig. 124: Open planning this unit made it much more liveable

Bathrooms

A bedroom and bathroom are the most intimate rooms in a home, which poses a problem when a flat's only bathroom is *en suite*, as everyone including guests must go through the bedroom to access it. This planning quirk was found in most 1-bed flats in the dataset, and was a common complaint of the 16 whose least favourite thing about their unit was the bathroom.

Another owner-occupier in Sahara Sands was frustrated that both bathrooms in his 2-bed unit were *en suite* and despite having the means to change it, the plumbing, embedded in prefabricated concrete wall panels, was impossible to move. Elsewhere, this situation arose incidentally when a 1.5-bed Ottawa Court flat (see original plan Fig. 117) was made wheelchair accessible by combining the linen closet, bathroom, WC and part of the entrance into one enormous ablution suite which one now had to pass through to reach the bedroom.

Another common complaint was that a flat had no shower. Bathtubs were originally fitted in all buildings surveyed, but over the years, showers have become the norm as they are much more efficient in terms of water usage and time. A shower is also preferred by the elderly and mobility-impaired who struggle to get in and out of a bath unassisted. Many owner-occupiers made this change to their flat, and some planned to when they could afford it. Some had replaced the old geyser with a high-pressure one and installed a shower head over the tub (a cheaper alternative). A few renters said landlords were unwilling to carry out this work because of the costs involved. Most baths had a geyser suspended on wall brackets directly above them, which bothered some people, who felt like it was about to fall on them while reclining.

The only user group for which a tub seems preferable to a shower is babies and young children. As tubs make good drip trays for drying clothes, many respondents had a fold-down drying rack or washing lines above them. As such, a bathtub is by no means useless or redundant, it is just not practical as the only means of washing, and should be treated as a nice-to-have.

A bathroom is the only space in a home that is subject to peak usage whether occupants are at school, college or work, and even children and those who prefer to ablute at night need access to a WC and wash handbasin (WHB) in the morning. One solution recorded here is to put the WC in a separate adjacent room so spaces can be used simultaneously, and this was found to add disproportionate use value. A lack of bathroom space had always been addressed if planning and budget permitted, and if flats had two bathrooms, it was almost always the occupant's favourite feature.

In Marine Sands, **Serina** (23) shared a compact 2-bed flat with her mom and younger brother, and coming from a big house, they had compromised a lot on space, The main bathroom had a bathtub and the *en suite*, which was internalised and mechanically ventilated, a shower. This meant the adult family could choose which they preferred, or use both at the same time—handy when guests stayed over.



Fig. 125: The unit's two bathrooms made the space liveable.

The building, I was told, experienced all manner of plumbing problems. "There was a water leak in our bathroom that ruined our cupboards and also the flat below. Some of our stuff got damaged but was covered by the landlord," explained Serina. The centralised plumbing was because Marine Sands was originally a hotel, so all toilets are cisternless and flats have no geysers, being fed instead by a big ground level water heater through small, sealed ducts. The supervisor agreed that this system is far from ideal for long-term residential applications.

Two of the three other internalised bathrooms recorded, with no openings at all to the outside air, were awful spaces. The first was damp and stuffy, as the extractor fan had long stopped working. The second, in a social housing building, was dank and pitch dark (the electrics must have shorted) so a door was left ajar, and the duct was uncovered, exposing messy pipework. This room's only redeeming feature was its two doors, one each from the bedroom and passage. This clever planning trick was also found in the internalised bathroom of a Tenbury 1-bed where all was in working order.

In two buildings, flats were designed with a separate shower cubicle off a passage. In one of these units visited, the cubicle was used for storage and in the other, the interviewee found it strange: "What if a man lived here?!" she said. That no-one in this study appreciated the separate shower should not however be taken as a reason to discount this feature, which can boost a flat's functionality greatly when designed well.

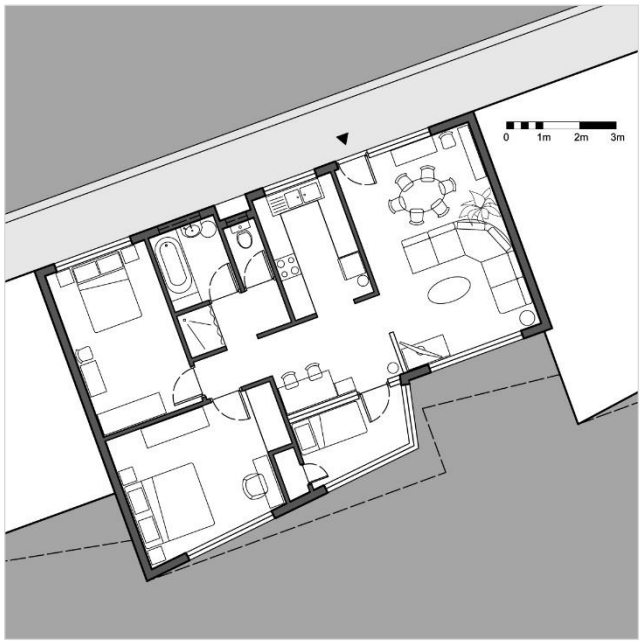


Fig. 126: A separate shower means a unit can be upgraded to two bathrooms just by adding a WC beside the bath.

In Marine Towers, **Zaahir** and his wife renovated their 3-bed unit to give it two full bathrooms. Relocating the master bedroom door meant they could incorporate part of the passage to create a new *en suite*, and they removed the wall of the WC, merging it into one large family bathroom. This suited their needs, but the bedroom opening onto the lounge created a privacy issue: visitors arriving at the front door had a clear line of sight through to the most private part of the home.

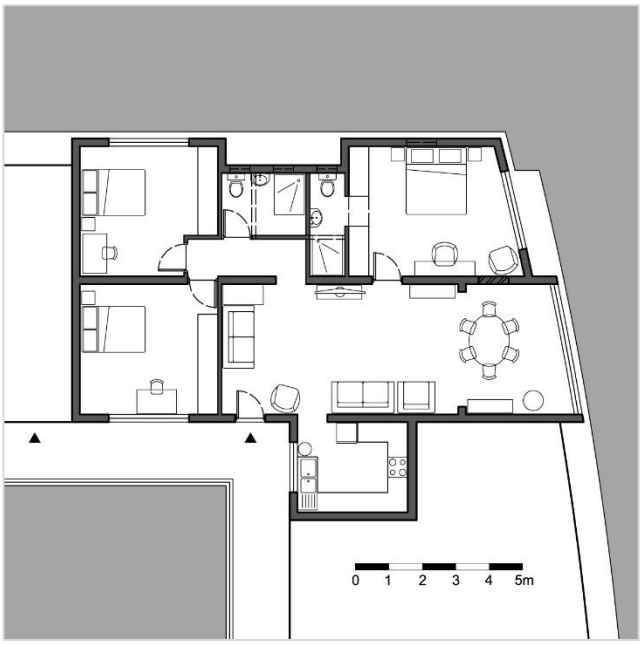


Fig. 127: This unit now has two bathrooms, both with showers.

More than one in ten respondents reported a nasty smell in their flat, usually a 'sewer' odour from drains in the bathroom and/or kitchen. Leaking pipework, blockages from years of built-up residue, and inaccessible ducts are to blame, an issue that is exacerbated by poorly ventilated bathrooms and made worse the lower down one lives. In old flats, little can be done besides using caustic drain cleaner, leaving plugs in, ventilating offending areas, or masking the smell. Quite a few owner-occupiers had tried to address their flat's plumbing issues to no avail, as their fittings were tied into an old-fashioned sanitation system not designed to be modified at point of use.

Living Areas

Together with the kitchen, living areas are a dwelling's inhabitable zones. Architect Louis Kahn called them 'served' spaces, supported as they are by (merely) habitable 'servant spaces' (wet areas, circulation and storage).

The width of a flat's inhabitable spaces is set by the building's structural grid, where the span of the concrete beams = 1 bay. The largest bays recorded were around 4.5m wide, found in Port O Durban's duplexes, and in the front part of Shorelands, where the main space of the bachelor units was about 6m deep (see Fig. 120). This 3:4 proportion works well for a single multi-functional space where the three primary zones (eat, sleep, relax) can be arranged in a single container and sized according to user needs. With larger flats that have separate bedrooms, however, narrower, deeper structural bays are easier to plan as distinct living zones. The narrowest column grid recorded was a little over 3m (Marine Sands) and the average across the dataset around 3.9m.

As a flat's internal brick walls are seldom loadbearing, the outward-facing inhabitable rooms always reflected the structural grid, but the plan could shift around inside to create smaller interlocking servant spaces. Some Architects had taken advantage of this by staggering living areas to create two distinct zones, usually with the dining area doubling as an entrance hall.

The part of the home where occupants spend the most waking hours, living areas might be expected to have the most stringent design parameters, but this is not the case. Even in large houses today, dining is seldom afforded a separate room, and myriad other options are available: eating at a farm-style kitchen table, on bar stools at a counter, *al fresco* on a balcony or terrace, or even on one's lap. Smaller flats in this study never had a dedicated dining area, and in bigger ones the dining table tended to be a multi-functional space that doubled as a desk or a social area for games and visitors. Where space was limited, a rectangular table pushed up against a wall short end first was observed to work well.

Depending on occupants' lifestyles, dining tables usually occupied the living area closest to the kitchen, or sometimes the zone near the outer window for the better natural lighting and higher seated eye level that revealed views not visible from a low couch. The flatscreen TV, which occupies less plan space and can be wall-mounted, has freed up living areas considerably.

Technological advances have meant a decline in appreciation for books, and while many interviewees, particularly pensioners, had large bookcases, there were even more flats that had not a single book in sight.

Balconies

Studying the plans of any half-bed unit, it is easy to imagine how the original open balconies of Beachfront flats might have looked, but actual examples were thin on the ground. The eight open balconies I visited were in only three buildings. Two were in Yarningdale: one was in **Seefeld**'s back-facing unit in the annexe, and the other was a long, narrow space that housed aircon units, a drying rack, and other bits and bobs.

In Maldonado, both interviewees had open balconies in a building where only a third of balconies had been enclosed. Reasons could include the balconies' practical size and proportion, their hybrid balustrade design which is brickwork up to 600mm with steel above that (a good safety/visibility compromise), and their connectedness to the rest of the home, being accessible from the lounge and both bedrooms.

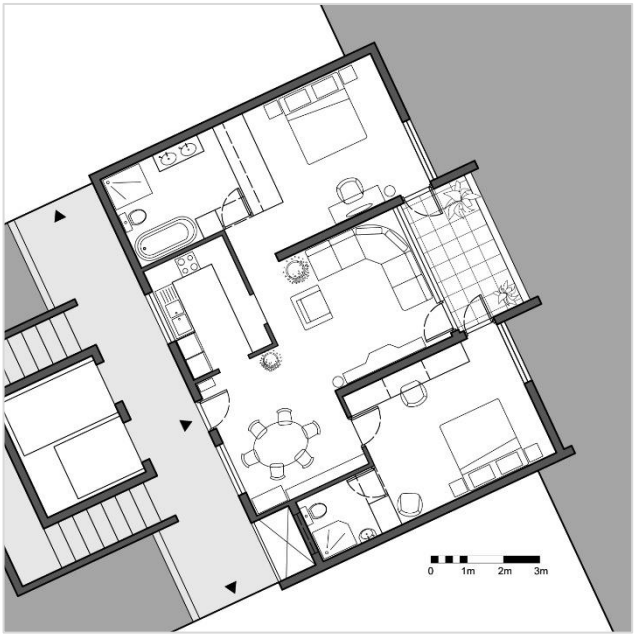


Fig. 128: The semi-recessed balconies in Maldonado.

Port O Durban was the only building surveyed where every unit was duplex, all had balconies, and not a single one had been enclosed. Like Maldonado, the balconies are partially recessed, fully covered, protected and private, with excellent views. The compact units were also designed with a half-bed upstairs to add plan flexibility; in one case it was a treatment room, in another had been absorbed into a bedroom, and in a third, was used as an office. Ultimately, these balconies' saving grace was almost certainly their octagonal shape, which makes them not only attractive but also difficult and costly to enclose.

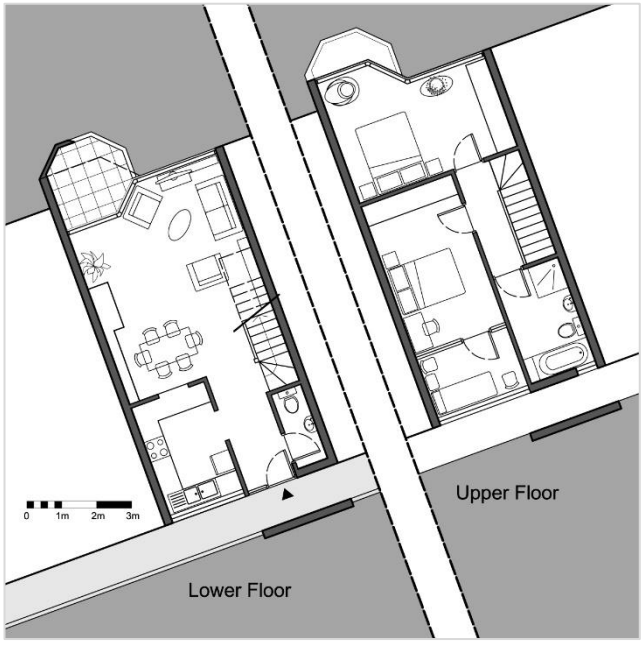


Fig. 129: These trademark balconies have solid balustrades that appear to 'unwrap' towards the sea (see Fig. 89)

Conclusions

Analysing a dwelling by the experience it offers allows the Architect, now researcher, to comprehend the places s/he makes in a more complex, layered way. The user perspective reveals a more elastic, 4D spatial web that incorporates time (past, present and future), change, and real-life adaptation strategies.

Adopting an investigative, participatory approach to the design of new residential high-rises is sure to positively affect the outcomes, so this chapter's primary link to spatial justice is methodological. It endeavours to present qualitative data on a par with empirical data, remove any expert/layman prejudice that exists, and bring to the fore voices and opinions that might otherwise remain unheard in the housing development process. While not the most efficient way of doing this, this method does test how detailed ethnographic data can be translated into practical recommendations.

Like any product, homes that are ethically produced and distributed and are accessible and affordable to a socio-economically diverse clientele can only contribute to greater systemic equilibrium. If we consider satisfaction a valid indicator with respect to housing, then the quality of life shown to result from a safe, pleasant, peaceful home is worth pursuing in the interests of spatial justice.

I must mention here the two types of output derived from the experiential data: universal principles, deemed applicable in any context, and local parameters specific to this time, place and population. The exact nature of views, for example, will vary greatly depending on where in the world—and even where in which city—one lives, but the positive psychological effect of having a view is unlikely to differ much with geography. Similarly, the impact of sea air and onshore winds on buildings and inhabitants is particular to marine environments, but the way forms, materials and maintenance procedures can be adapted to respond to harsh and unexpected weather has global relevance, especially in light of climate change.

While the climatic performance of these flats is inextricably linked to their location in a southern hemisphere subtropical climate zone, the lessons they offer about environmentally responsive design and adaptation strategies translate adequately between contexts. The same applies to pests in the home: the type of creatures and the problems they cause are specific to a locality, but their detrimental effects, how they affect different parts of a building, and the steps that flat-dwellers, designers and maintenance crews can take to reduce the chances of infestation and mitigate negative outcomes, will not.

Turning to a unit's position in the building, we find that its outer façade is required to perform differently depending on exactly where it is. In contrast with the Modernist principles of uniformity and standardisation, according to which most of these structures were

designed, this research indicates that the residential high-rise of the future will be better equipped to deliver safety, joy and comfort to users if its façade adapts both with height and orientation, becoming more or less permeable in response to environmental conditions. A variety of opening sections means a façade can be modified according to the weather, outlook or desired level of enclosure on any given day. The architectural language does not need to change; The same materials and detailing can be manipulated so each façade and part thereof performs uniquely.

Like a stratified rainforest ecosystem, each band of a high-rise was found to support different inhabitants. Ground-floor flats have many disadvantages, and most negative stimuli here are outside residents' control, suggesting that in an urban setting, this level is best given over to commercial, semi-public or communal space. Conversely, high and sky-level flats were found to offer many benefits, including better security, near-suburban levels of peace, and great views, which all appear to positively impact occupants' well-being.

The disadvantages of living at height can be mitigated by building components and systems, from elevators to window mechanisms, that are properly specified, well-made and looked after. These aspects can be controlled by residents, or those who design and maintain a high-rise. Planning, however, rests solely with the Architect, and depends largely on building-level parameters such as structural, circulation and sanitation systems decided in the design stages. We have seen here how flat-dwellers, whether they renovate or not, will adapt the spaces of the home, particularly living areas, according to their possessions, lifestyle and means. These variables differ greatly, so the designer's role is to dictate as little as possible, instead planning spaces that are sized reasonably relative to one another and connect into a single, functional whole that is occupiable in many ways. Architects should study how flat-dwellers in their locality and target user group occupy their homes, as demonstrated here, and respond accordingly. This is the nature of the methodological approach.

The data indicated, among other things, a preference for open plans and more fluid, flexible bedroom types, the benefits of half bedrooms and open balconies, and some minimum requirements for kitchens and bathrooms. These may turn out to be completely different in another location, but the right to a shelter that fulfils inhabitants' needs and dreams and lets them choose exactly how to dwell in it, is universal.

This chapter has evidenced the potential that exists to activate the upper levels of urban Durban for housing stock of all types, and catalyse much-needed change in the urban environment. Barring developer- and institution-driven adaptive reuse for homogenous groups (students, pensioners and SH beneficiaries), little progress has been made in this regard which, I argue, in itself constitutes a spatial injustice.

With a clear picture of the individual units making up a block of flats, we can now move up to the next spatial level, that of the building. The next chapter scrutinises the physical and operational configurations of the 51 blocks surveyed, from style and typology to size, form, and residential density. We will examine the ownership and management structures, shared facilities, circulation, and escape strategies in these buildings, and finally, how the condition and maintenance of high-rises can be seen to affect their inhabitants.

Chapter 9:

White Mountain, Sandy Shores

Findings – Building/ Spatial

> "[T]rying to define an architecture of the ordinary would be a return to the postmodern concept of the autonomous architectural object as a microcosm of the entire city: or the idea that the molecular 'forces' of the ordinary at play in the city could find expression and cohesion in a single structure. The question here is not that of the autonomous object that contains and thus stands apart from or resists the city, but of the city producing its own architecture."
> (Fabricius 2012)

Our next spatial scale, that of the building, moderates between the individual dwelling and the urban realm. The above talks of the interplay between architecture and the rituals and practices of everyday life, and their potential for mutual influence to generate a regionally responsive product informed by both top-down and bottom-up forces. This can be identified in Park's (2012) account of how traditional Korean courtyard houses (*hanoks*) were adapted into the modern high-rise apartment blocks (*apatu-danjis*) that now dominate South Korean city skylines. What appear from outside as rows of identical, anonymous slabs are revealed to contain homes that retain centuries-old spatial hierarchies and relationships, with wide continuous balconies front and back that serve as outdoor living rooms for cooking and family life. If the Verticolapa were to be South Africa's answer to the *apatu-danji,* how would it negotiate the macro and micro forces, and the multiculturality acting on it?

In seeking to imagine a more integrated residential high-rise, the coming chapters will explore two things:

- Hard/**physical infrastructure** – what is provided in what configuration, who owns or occupies space, and how it is secured, accessed, and managed.

- Soft/**social infrastructure** – the extent to which neighbourhood social ties, friendships, support networks and communities form in these buildings, and the spatial component of such interactions.

Thus far, we have seen how spaces designed many years ago for one specific population group have adapted with much success to new populations, ways of inhabiting, and indoor densities, through physical interventions such as enclosing balconies, and administrative devices such as overnight guest fees.

More than just a collection of autonomous cells, the apartments in a high-rise block are co-dependent, glued together by their interstitial semi-private spaces to form a cohesive 'organism', and it is at this level that spatial in/justice becomes more apparent. Not only must we question *who* has access to a specific collective living environment, but also under what conditions. Who deems who is suitable to own, rent or stay in a place? If we concur with Young that "a model of a transformed society must begin from the material structures that are given to us at this time in history" (Young 1999: 234), and acknowledge that we are beginning with a segregated, uneven and intrinsically unjust urban fabric, we must accept that without changing the mechanisms by which its component parts, its buildings, are occupied, inequality will continue to reproduce and worsen.

It has been established that a reasonable mix of income groups and races is present in the study area, but the extent to which they exist in close urban proximity, or in the same building, varies significantly. Census data shows an uneven racial distribution across the Beachfront, and higher numbers of lower-income residents residing in South Beach. With a few exceptions, capital in this context is held largely by White and Indian population groups, and as Soja (2009) reminds us, everyday urban functions are a "primary source of inequality and injustice in that the accumulation of locational decisions in a capitalist economy tends to lead to the redistribution of real income in favour of the rich over the poor". It follows that if no action is taken, this uneven urban fabric will continue to polarise.

Clustering of 'like' residents was found to occur naturally at building scale based primarily on residents' economic standing and to a lesser extent, religion. High levels of racial clustering appeared almost always to result from one or the other of these rather than any express directive (as was the case in apartheid) or personal choice (as seen in more equal societies). So while the type of people who buy or rent

a flat on the Durban Beachfront is still determined very much by ingrained power and privilege structures and by rigid built forms, there is certainly interplay between a block's resident population and its day-to-day operation—how it is secured and managed, how (and how many) people move around it, and the sort of living environment it provides.

Architectural Style and Typology

As covered in Chapter 1, the high-rises here represent a variety of architectural styles from the mid-1920s to mid-'80s, with a gap in the decade around WWII. Building names reflect a variety of international influences, many derived from British places (Sandringham, Willsborough), people's names (Althea, Montezuma), or faraway seaside locations (Hawaii, Maldonado). Many building names reference the ocean (Wavecrest, Dunelands) and a few, local landscape features (mangrove and protea plants; Tugela River). In new high-rise developments, there is opportunity for a name to be so much more than a sign above the entrance—something more akin to a brand that spearheads a collective identity referencing something distinctly regional: flora, fauna, language, or cultural practices, objects or products.

Architectural appearance did not feature heavily in the accounts of interviewees, though one in five respondents overall mentioned their building's architecture as a positive. Individuals from Rydal Mount, Montezuma, Grandborough Court, Port O Durban and Groote Schuur each cited the architecture as one of their favourite things about it. Appreciated both for the way they look and work, these buildings all have some recognised architectural merit, and represent either a version of Modernism adapted to local conditions, or a pre-war style favoured for its beauty and historical grandeur.



Fig. 130: Groote Schuur's expressive floating canopy roof.

Architectural style was not only dependent on the fashion at the time and the Architects employed, but also the client's taste and budget. The most prolific developer on the Durban Beachfront, it seems, was one F.E. Jiran Esq., who reportedly commissioned at least five buildings in the study area: Blue Waters, Bel Aire, Crestmore, Northlyn and Carillon. The first two, originally blocks of flats designed by Reginald Buck and completed in the late '50s/early '60s, have considerable stylistic merit and are today run as hotels by Mr Jiran's sons. Bel Aire, with its colourful glass mosaic façades depicting Zulu beadwork patterns, was the country's first and for a long time only building to overtly reference traditional African culture (Marschall 2001).

Most Beachfront high-rises were commissioned by the private sector, but three of those surveyed were constructed by the public sector. Elwyn Court, behind Addington Hospital, was built circa 1955 as housing for sub-economic (White) Durban Corporation workers; and two adjacent buildings in North Beach, Key West and Floradoone, built circa 1962 and 1966 respectively, as military quarters. This oral history aligns with their no-frills architecture, their near-identical densities (600 du/ha) and parking ratios (0.8). Both blocks have operated as flats for many years, Floradoone as a shareblock and Key West fully sectionalised.



Fig. 131: Floradoone (left) and Key West (right). Raising the latter on *pilotis* was a response to the low-lying wetland site.

Building typologies are a function of economy and designer/client preference, but are also a response to site location, orientation, and size. The typological groups settled on earlier are Point, Tower, Slab, Doughnut and Letter. Towers, more fitting for commercial and skyscraper applications, were not present in the study area, but the slab typology is well-represented here in all proportions and sizes, from a tall slab with a narrow footprint to a long, low slab with a deep footprint.

Table of Buildings Surveyed

Building Name	Address	Zone	Typology	Construction Date	# of Floors	# of Units	Site Area ha	Resid. Density du/ha	Owner ship	# Bays	Parking Factor
Althea Court	109 Snell Parade	1	Letter [C]	1933	10	54	0,15	**360**	SB	45	0,83
Baltimore Res	10 Anton Lembede St	3	Letter [L]	c. 1955	12	74	0,09	**822**	IN	0	0,00
Barcelona	199 Playfair Rd	1	Slab	1963	21	113	0,35	**323**	SB	100	0,88
Beach Hurst	243 OR Tambo Parade	2	Letter; Slab	c.1924; 1967	4; 9	64	0,18	**356**	SB	36	0,56
Belmont	97 OR Tambo Parade	3	Doughnut	1978	20	105	0,31	**339**	ST	95	0,90
Bencorrum	183 Prince St	4	Slab; 2 Letters	c.1940; 1955; 1966	23;17;8	344	0,5	**688**	ST	181	0,53
Capella	69/71 Gillespie St	3	Letter [H]	c.1982	13	60	0,09	**667**	ST	24	0,40
Carillon	22 Prince St	5	Letter [J]	1962	15	92	0,24	**383**	ST	67	0,73
Carlton Towers	80 Somtseu Rd	1	Letter [E]	1966	21	125	0,27	**463**	ST	100	0,80
Connemara	29 Sol Harris Cres	1	Letter [E]	1964	27	156	0,26	**600**	SB	156	1,00
Courtleigh Heights	147 Snell Parade	1	Letter [E]	1969	14;10	61	0,08	**763**	SB	27	0,44
Crestmore	33 Sol Harris Cres	1	Slab	1961	18;12	107	0,18	**594**	ST	67	0,63
Cumberland	111 Snell Parade	1	Letter [J]	1938	8	33	0,12	**275**	ST/SB	30	0,91
Dunelands	135 Snell Parade	1	Slab	1957	8	48	0,15	**320**	SB	30	0,63
Edenroc	119 Snell Parade	1	Doughnut	1954	7	98	0,21	**467**	RH (SB)	0	0,00
Elwyn Court	370 Mahatma Ghandi Rd	4	Slab	1955	11	140	0,53	**264**	ST	40	0,29
Exeter Hall	24 Sol Harris Cres	1	Slab	1964	18	85	0,33	**258**	SB	103	1,21
Fairhaven	5 OR Tambo Parade	3	Slab	1934	18	60	0,12	**500**	SB	0	0,00
Floradoone	40 Sol Harris Cres	1	Doughnut	1966	12	80	0,13	**615**	SB	70	0,88
Grandborough Court	15 OR Tambo Parade	3	Letter [J]	1935	9	61	0,1	**610**	ST	27	0,44
Groote Schuur	2 Erskine Terrace	5	Letter [J]	1959	16	76	0,09	**844**	SB	27	0,36
Grosvenor Court	41 Snell Parade	1	Letter [B]	1936; 1963	7; 20	221	0,47	**470**	ST/SB (40)	147	0,67
Hawaii	15-29 Rutherford St	3	Slab; 2 Letters	varies (est. mid '50s)	10; 9	128	0,17	**753**	SH	12	0,09
Key West	15 Sandown Rd	1	Slab	c. 1962	13	108	0,18	**600**	ST	71	0,66
Maldonado	29 OR Tambo Parade	3	Slab	1982	19	51	0,12	**425**	ST/SB	51	1,00
Mangrove Beach Centre	91 Somtseu Rd	1	Slab	1965	27	250	0,62	**403**	ST	194	0,78
Marine Sands	237 OR Tambo Parade	2	Letter [J]	1970	17	128	0,15	**853**	ST	67	0,52
Marine Towers	34 Sol Harris Cres	1	Letter [C]	c.1962	15	79	0,23	**343**	ST	54	0,68
Merion Court	19 Prince St	5	Letter [T]	1952	15	98	0,19	**516**	SB	68	0,69
Montezuma	117 Snell Parade	1	Letter [T]	1964	16	66	0,1	**660**	ST	3	0,05
Northlyn	84 Somtseu Rd	1	Letter [E]	1966	20	128	0,16	**800**	ST	86	0,67
Ocean Way	33 Crieff Place	5	Slab	1952	13	47	0,06	**783**	ST	36	0,77
Ottawa Court	110 Gillespie St	3	Letter (t)	c. 1938	13	80	0,08	**1000**	SB	0	0,00
Port O Durban	50 Prince St	5	Slab	c. 1978	13	60	0,11	**545**	ST	60	1,00
Protea	11 Nathaniel Isaacs Cres	1	Letter [E]	1963	14	76	0,16	**475**	SB	46	0,61
Rydal Mount	130 Gillespie St	3	Letter [E]	1948	11	188	0,19	**989**	ST	92	0,49
Sahara Sands	25 Nathaniel Isaacs Cres	1	Slab	1965	24	96	0,16	**600**	ST	70	0,73
San Remo	127 Snell Parade	1	Letter [E]	1953	10	52	0,17	**306**	SB	28	0,54
Sandringham	103 Gillespie St	3	Letter [J]	c.1935	7	48	0,08	**600**	ST	20	0,42
Shorelands	159 Snell Parade	1	Doughnut	1956;1965	9	131	0,22	**595**	ST/SB	20	0,15
South Sands	39 Prince St	5	Letter [T]	c.1954	16	104	0,26	**400**	ST	66	0,63
Stromboli	9 Nathaniel Isaacs Cres	1	Letter [J]	1963	17	80	0,16	**500**	SB	60	0,75
Tenbury	30 Erskine Terrace	5	Letter [F]	c. 1961	11	76	0,09	**844**	ST	40	0,53
The Oceanic	20 John McIntyre Rd	1	Letter [T]	1964	13	79	0,19	**416**	H/SB	69	0,87
The Parkview	17 Boscombe Place	3	Letter [L]	1937	11	220	0,14	**1571**	H/RH (SB)	0	0,00
Tugela	30 Sol Harris Cres	1	Letter [h]	1964	12	88	0,18	**489**	ST	46	0,52
Wavecrest	26 Gillespie St	3	Letter [L]	c. 1956	15	86	0,11	**782**	CO	52	0,60
Wendover	143 Snell Parade	1	Letter [L]	1954	10	77	0,08	**963**	SB	12	0,16
Whitehaven	67 Gillespie Street	3	Letter [H]	1958	10	47	0,09	**522**	ST	7	0,15
Willsborough Mansions	23 Seaview St	3	Letter [r]	c.1947;1975	13	143	0,19	**753**	ST	104	0,73
Yarningdale	199 OR Tambo Parade	2	Slab	1964	21	104	0,17	**612**	SB	78	0,75
				Average:	14	101	0,19	**590**	-	57	**0,57**

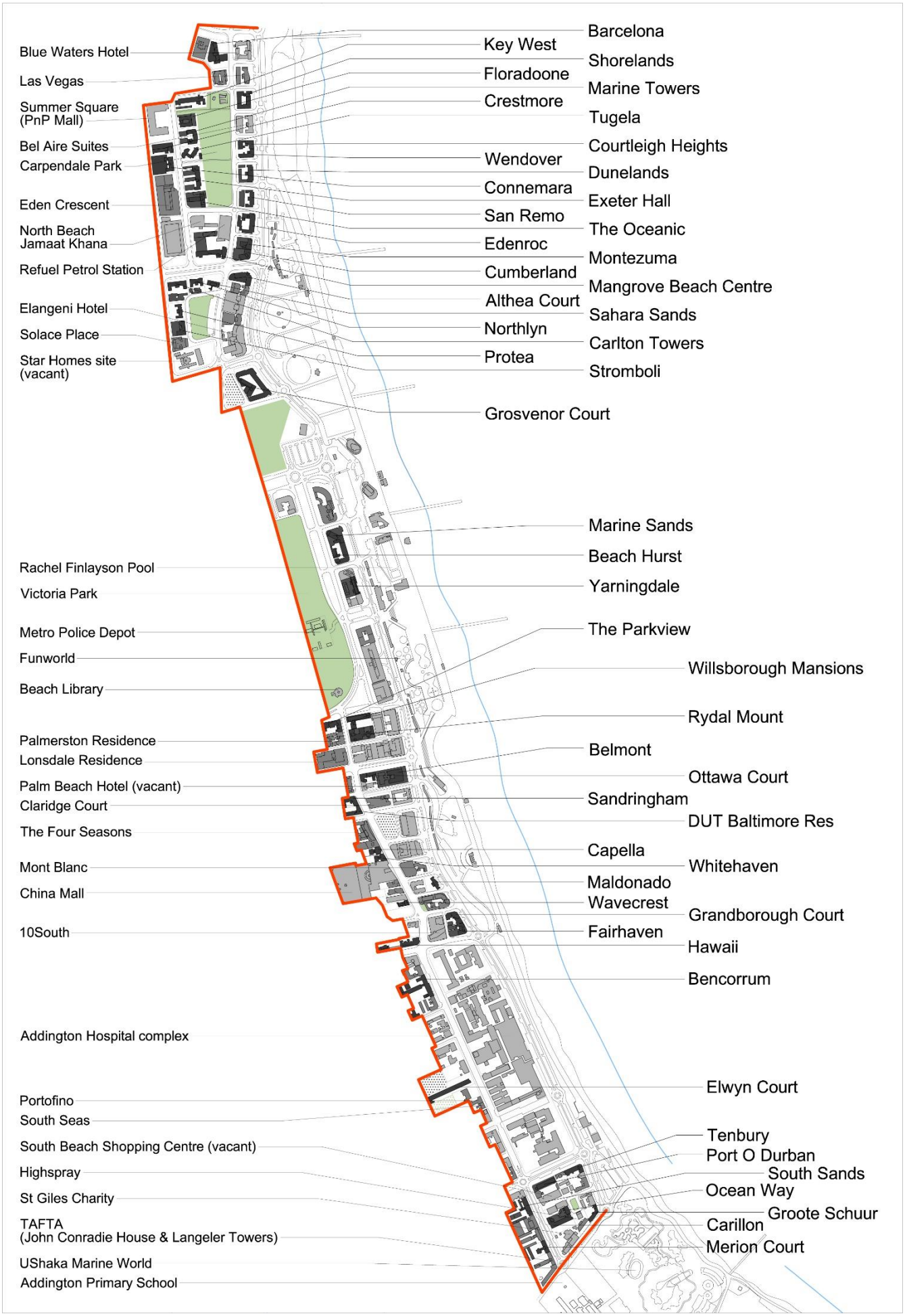


Fig. 132: Plan showing location of all buildings surveyed

The doughnut typology, which requires quite specific site conditions, had only three distinct examples here: two close together in North Beach (Shorelands and Floradoone), and the other (Belmont) in South Beach Central. Edenroc retirement home is recorded as a doughnut, but only has a courtyard on upper levels and displays a complex form.

By far the most popular typology found here is the letter, with 60% of buildings surveyed falling into this category. The letter 'E' was most common, usually created by returning both ends of a slab building with a central lift core. The letters 'J', 'T' and 'L' made up most remaining examples in this group, with the strokes of the letter creating perimeter development along one or more street edges, or in some cases set back or oriented to capture views or sunlight.

It was uncommon for building footprints to rotate relative to site boundaries, but when they did, this enhanced the spatial quality of individual units and introduced dynamism into the orthogonal urban grid, creating spatial dialogue between buildings and carving up surrounding open space in unusual and useful ways. Only one building—Tugela in North Beach—used this technique to its full potential. A design anomaly, the H-typology block comprises two parallel, outward-facing 12-storey slabs with stepped façades, joined together by a lift core. The whole configuration is rotated 45° to the street, creating interesting and varied outlooks—near views into interior 'courtyards' and of residents circulating in passages and stairwells, mid-distance views into the road and park, and framed views of the sea and Berea. Ceramic mosaics, tropical plants and breezeblock walls in the circulation spaces lend this otherwise plain-looking building a regional identity and enhance day-to-day liveability.

Size, Form & Residential Density

The preceding table summarises data for the 51 residential high-rises surveyed. Multiplying the number of dwelling units in a building by the site area gives us a block's net residential density (du/ha), but so many physical parameters (height, footprint, form) shape a high-rise that the figure does not reveal much unless viewed spatially. I asked: *What does density look like in this context?* In addition to a building's physical parameters, I looked at access, circulation, ownership and management, resident population and urban context, and derived a parking factor by dividing the number of bays in a block by the number of units.

The high-rises surveyed range from seven to 27 storeys high. The fewest units (33) are found in 7-storey Cumberland in North Beach, and the most (344) in three-building Bencorrum behind Addington Hospital. 'Smallness' was appreciated by four respondents—in Maldonado, Cumberland, Dunelands, and San Remo—who felt the compact size and limited number of flats made the block more intimate and/or manageable. Conversely, 'bigness' at building scale was appreciated by only two people, who liked the idea of living in a large, landmark structure. The smallest site (600m^2) belongs to Ocean Way at the southern tip of the study area and the largest (6200m^2) to Mangrove Beach Centre, North Beach's faded commercial hub.

The lowest residential density, 258 du/ha, is found in 18-storey Exeter Hall, which is surrounded by surface parking and has the highest parking factor (1,21) in the dataset. The highest density, 1571 du/ha, belongs to the Parkview Hotel and Retirement Home, which houses 220 small units in 11 storeys on a compact plot with no parking. Of the other four pre-war buildings with no parking, two are now flats (Ottawa Court, Fairhaven), one student accommodation (Baltimore), and the other (Edenroc) also a retirement home. Overall, the average building height in this dataset is 14 storeys, and number of units, 101. The mean plot size was 0,19 hectares and the residential density, 590 du/ha. The average parking factor worked out to be 0,57. No building matches these figures exactly, but the nearest-to-typical case is illustrated below.

To visualise the range of forms and compaction levels found here, I chose four pairs of adjacent buildings from across the study area representing a range of densities and all three typologies, and carried out comparative analyses.

CRESTMORE (ST)

An articulated north-facing slab, Crestmore accommodates 107 units on a site measuring 1800m^2. The main part of the building is 18 storeys, and the lower portion 12 storeys with a covered roof terrace.

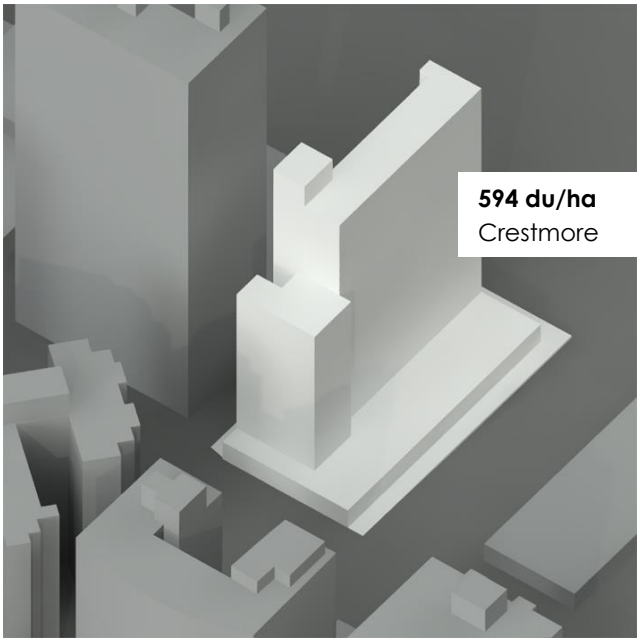


Fig. 133: Crestmore in the NW study area, next to Connemara and opposite Marine Towers. Tugela is visible bottom left.

A split-level, breezeblock-screened podium takes advantage of the sloping site to house 67 bays and arrive at parking factor of 0,83.

Only one respondent was interviewed here, though not for lack of trying. There was no supervisor for most of the research period, and the intercoms were down for months. Residents appeared diverse in many respects, a mix of all races made up mainly of young renters and elderly owner-occupiers.



Fig. 134: Crestmore overlooks Summer Square open air mall.

BELMONT (ST) and OTTAWA COURT (SB)

These two buildings, the first and last high-rises built at the busy West St node in South Beach Central, offered very different dwelling experiences.

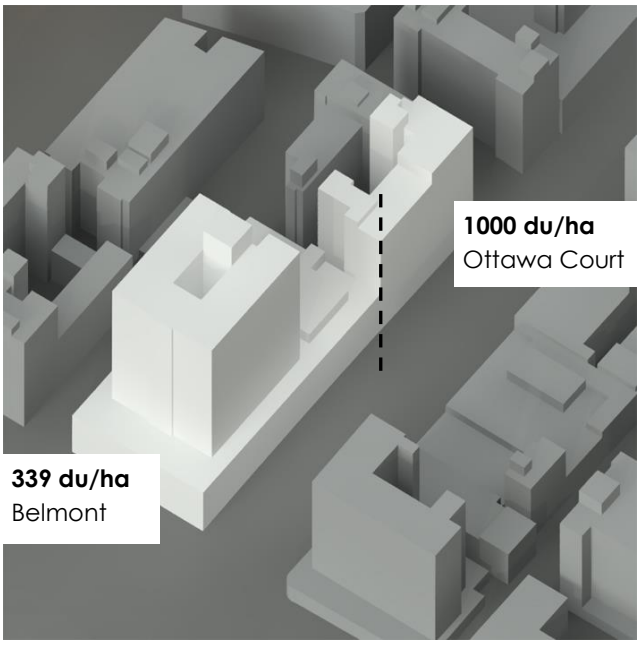


Fig. 135: The buildings line the southern edge of West Street Mall, a busy pedestrian and public transport-focused strip.

Belmont is a 15-storey doughnut-shaped residential tower growing out of a large commercial podium, the top three floors of which are a parking structure that extends to the plot boundary and hovers over two levels of shops, takeaways and bars. This forms a vertical buffer between entertainment and residential functions, and serves to adjust for the sloping site. Horizontally, it encourages active street edges, with the east (entrance) side behaving like a public lobby that 'sucks' pedestrians into the arcade. The first-floor corner glass box, formerly a Chinese restaurant, was subdivided into rooms offering daily accommodation.



Fig. 136: Belmont is Brutalist in its scale and use of concrete.

The podium also houses a mosque, which is reached from the south side. Density is a low 339 du/ha as the plot is large (3100m^2), and so are the 105 units, all two- and 3-beds. Many of Belmont's flats are owner-occupied, but not all of them full-time, making the effective density even lower. One parking level (95 bays) is reserved for residents (factor 0,9) and the others for the commercial units and neighbouring Tropicana Hotel (1950s). The occupants I met were racially diverse, but mainly older and quite well-off.

Pre-war Ottawa Court has the second-highest density in the dataset, at 1000 du/ha. The 80 spacious flats are mostly 1.5-beds and a few bachelors, spread over 11 residential levels on an 800m^2 site with no parking. The commercial ground floor has several small shops and takeaways, and at least one sports bar. These relate well to the street, and a wrap-around canopy shelters pedestrians from weather.

A handful of older owner-occupiers or their family still lived in Ottawa Court, but most residents rented, and subletting to unrelated others was common. Occupancy limits were higher than elsewhere, with extra visitors paying by the night, but overcrowding was still the block's biggest challenge. As such, effective density was even higher than numbers suggest: the supervisor said it was not unusual for 1000

people to pass the entrance in any 24-hour cycle. This had taken a toll on the original lifts, one of which was replaced during fieldwork.



Fig. 137: The canopy obscures pedestrians from residents, making them more vulnerable to street crime, which is rife.

The supervisor, a down-to-earth owner-occupier, when not on the roof installing water tanks or in a flat replacing a geyser, sat in a tiny office off the grand lobby, fielding requests (Fig. 152). His job was not easy, and the actions of some directors disregarded the good of the building, but he juggled things aptly and was liked and respected.

Ottawa court had the most diverse resident body of any building visited in terms of age and ethnicity, and housed a wide variety of foreign Africans. Economically, however, all those interviewed fell into lower income brackets and alluded to the high cost of living or rent. Many students, adult dependents and pensioners lived here, and car ownership was low.

WENDOVER (ST) and COURTLEIGH HEIGHTS (SB)

This pair of letter typology buildings on North Beach's frontline share a city block. Both have above-average densities but offer very different dwelling experiences, largely due to the dissimilar way they are run.

Ten-storey Wendover is a quiet, unassuming building that shares its rhythmic, grounded architectural style (and architects too, I heard) with nearby Dunelands and Shorelands. The block consists almost entirely of bachelor flats which, on an 800m^2 site, results in a deceptively high density of 963 du/ha, but with only two occupants allowed per flat and many units standing empty, effective density was low.

Some empty flats were holiday homes, but most were investment units bought by absent owners to renovate and resell or rent out. I did not find owner-occupiers living here, and the tenants interviewed knew few of their neighbours—which they preferred.

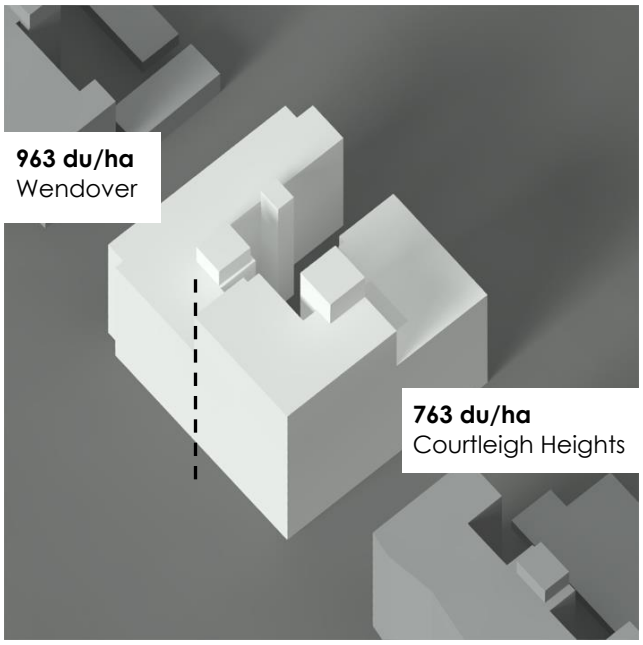


Fig. 138: Wendover was one of the first high-rises constructed on this strip, and Courtleigh Heights, one of the last.



Fig. 139: Early Modern Wendover is simple and unpretentious; Expressed concrete framing adds visual interest and privacy.

Residents of Wendover did however complain about the block's constant construction noise, which made it near impossible to work or relax at home during the day. During fieldwork, contractors, trucks, building materials and rubble were often seen entering or exiting the back entrance. The supervisor, whose flat opened onto the driveway, was always too busy to do more than greet. Caretaking staff lived in the outbuildings on site and the place was spotless, with all infrastructure in fine condition.

This was the only property to use solely biometric security (fingerprint scanners). Guests would call on arrival, and residents had to come down and let them

in (and out) through two glass doors. The system had reportedly worked well, though hanging around the entrance waiting can be awkward for visitors. Despite its high density on paper, the combined effect of Wendover's people-free entrance and small population made it feel rather deserted.

With only 12 parkings (courtyard bays and garages) for 77 units, car owners parked in the street or a nearby parkade. Not much diversity was captured. The few residents I met were White or Indian, in their 40s, and in the Other religious group.

Courtleigh Heights consists of a 14-storey L-shaped wing pointing northeast, and a lower back-facing portion with seven levels of flats raised above a split level parking garage with staff quarters and a screened washing line area atop. A total of 61 larger flats, a mix of 1.5, 2.5 and 3.5-bed units, on an 800m^2 site results in a density of 763 du/ha. Of the resident body, an estimated 70/30 were tenants/owners. Most households were families with children, and identified as Indian and followers of Islam. Several extended, inter-generational families lived here, either together or spread over multiple units.



Fig. 140: Courtleigh Heights seen from Carpendale Park.

Diversity recorded here consisted of a few White and one Black South African resident, all linked to the Muslim community, two Chinese, and one foreign African family. There was a tacit flexibility with respect to occupancy and visitor numbers, and many households employed full-time domestic workers, some of whom lived on-site in the staff bedsits. As such, the building's density felt a lot higher.

Unusually, the entrance to Courtleigh Heights is on the north side street across from Café Jiran. It was the only block surveyed to employ three full-time live-in security guards to man the 24-hour reception and monitor CCTV cameras. These were spread around the building and facing the parking entrance and pavements, to reduce the risk of residents being mugged and to provide added surveillance for cars. Several residents' favourite thing about the block was the sharp, friendly security guards who knew everyone by name. The supervisor's office opened onto the reception, but she kept limited hours and I did not meet her.

With only 27 on-site bays, the 0,44 parking factor was inadequate for the middle-class households, many of which had two cars. The other issue was failing infrastructure—specifically the old lifts, one of which broke down near daily, and plumbing, particularly water supply and reticulation. This stemmed from years of inadequate maintenance, but management resisted major upgrades, a common issue with absent owners for whom special levies deride profits and deliver few rewards. The exterior paintwork was later redone, indicating perhaps a greater concern among decision-makers for how the building looks than how it functions for users.

CUMBERLAND (MO) and MANGROVE BEACH CENTRE (ST)

Despite both having low densities, these two North Beach buildings could hardly be more different in terms of built form and lived experience.

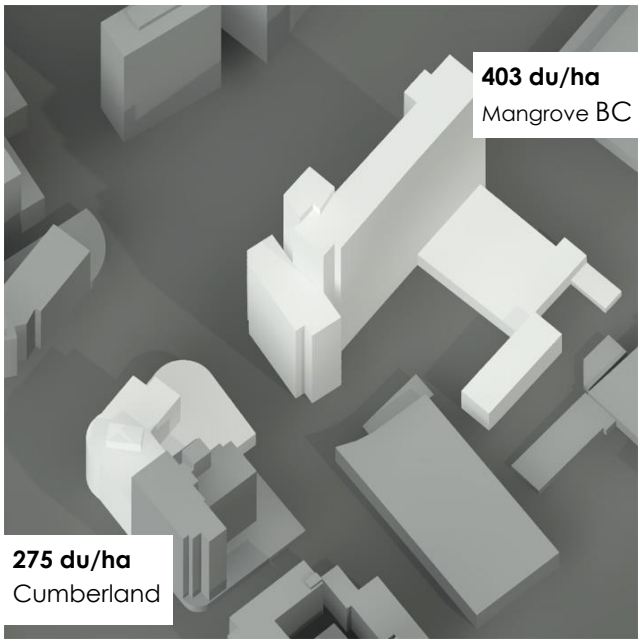


Fig. 141: The dissimilar buildings straddle Playfair road on one side of the busy Somtseu Rd intersection.

Cumberland has the smallest bulk of any building surveyed, and with 33 flats spread over seven levels, the dataset's third lowest density at 275 du/ha. Units are larger (one-, two- and 3-bed) and reached from a short interior passage served by two lifts and a staircase. Less than half the flats were occupied full-time, as many were holiday or second homes, so effective density was probably the lowest overall.

Those seen coming and going from the building were Muslim families with children, and a few elderly White folk. Glass entrance doors opened with a disc, and since intercoms were removed after a security breach, residents had to let visitors in and out. There were no security guards, but the feisty supervisor, whose flat opened off the lobby, was observed to fill this role himself. A capable handyman and former draftsman, he kept the building in top condition. The ground floor housed the vehicular entrance and three small shops. The 3-storey structure at the back consisted of staff quarters wrapped around two levels of parking with 30 bays, which results in a high parking factor of 0,91 but creates a blank, imposing façade onto the narrow pavement on Playfair Rd.



Fig. 142: Ex-hotel Cumberland has no distinct architectural style, but its recessed entrance addresses the corner well.

The largest single building surveyed in terms of bulk, the 24-storey residential slab of Mangrove Beach Centre (MBC) houses more than 250 flats. Its relatively low density of 403 du/ha is owed to its massive site (6200m^2). A shopping mall occupies the two- to four-storey podium that wraps around a parking courtyard, and the inconspicuous residential entrance opens off a windswept corner plaza.

Most flats are identical, spacious 1.5-beds, with some larger (two- and 3-bed) units either end, and from the open-air passages, conjoined units are discernible. A few flats were holiday homes, but most were filled to capacity, often with unrelated renters, and overcrowding was rife. Within this one high-rise, density is experienced at both extremes: the din of the crowded lobby contrasts sharply with the calm of a deserted sky-level passage.

Access for a building this size takes on a whole new dimension. In theory, residents swipe a disc to enter a door on one side of a security booth, and visitors enter on the other after a guard has buzzed up to the flat and they've signed in. In practice, the system is impossible for one person to control, and was inconsistent and easy to circumvent.

Aside from the dysfunctional lifts, about which we have already heard, there were complaints about blocked plumbing and old pipework, and one man had seen concrete fall from the FE stairs. The building certainly wasn't about to come crashing down, but the urban legend surrounding it had taken on its own life, and I sensed a solidarity among residents, a banding together in the face of dysfunctionality akin to that described by Simone (2004) and Hentschel (2015). The husband-and-wife supervisors operated in permanent emergency mode, and the Board, on receiving my info letter, told them "We don't want research here".



Fig. 143: Looking at MBC past the Refuel from Playfair Road.

The 194 basement parking bays in MBC belong to the single owner of the mall, and were rented by residents for above-average rates, but vehicles parked here were still subject to pilfering. The Somtseu Rd surface parking was managed by formal attendants, and the street and courtyard bays by informal car guards, and the only building façade that addressed the street at all, failed to activate it.

OCEAN WAY (ST) and CARILLON (ST)

These interlocking buildings at the southern tip of the study area occupy a rectangular piece of ground. One has about four times the other's bulk and is less than half as dense, but they are dwelled in similarly.

Early-'50s Ocean Way is simple and compact in its design. The 13-storey slab squeezes 44 bachelor units, one 2-bed and one 3-bed onto the smallest site in the dataset (600m^2), resulting in density of 783 du/ha. A 2-storey podium parking structure accommodates 36 vehicles, resulting in a parking factor of 0,77. This is very unusual for the time, indicating it was likely built for higher income (car-owning) singles and couples. At

the back atop the podium are communal washing lines and a small lettable flat intended for the supervisor. Today, less than 20% of units are lived in by owners or their families, and the rest are renters. The bachelors allow at most three occupants, after which overnight guests pay a low R50/person, which is strictly enforced.

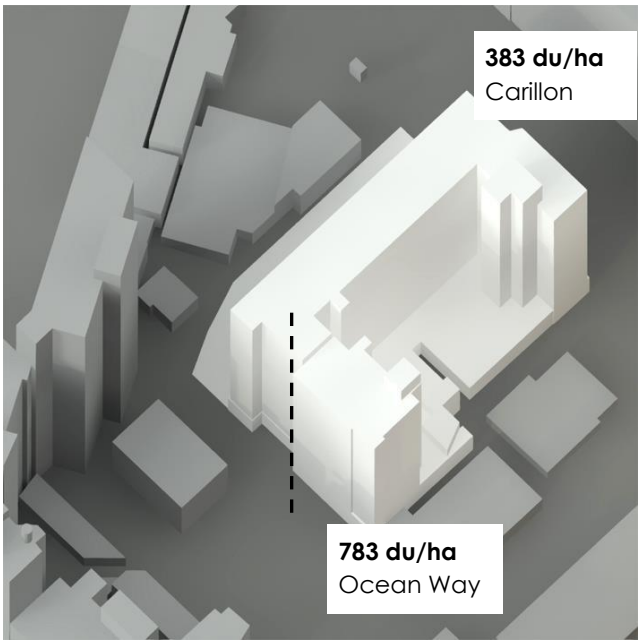


Fig. 144: The two buildings are a block back from the frontline


Fig. 145: Ocean Way overlooks a small cul-de-sac play park.

The vacancy rate at time of study was very low, and only two flats were holiday homes. Turnover was moderate, with tenants staying a minimum of six months and an estimated average of three years. Despite the high density, low overall resident numbers coupled with a clear frame of reference based on mutual respect, produced an intimate, friendly dwelling experience. Residents, while diverse in terms of age, race, religion and nationality, were all singles, couples and small families, mostly in lower income brackets. Muslim residents were underrepresented, likely due to the small flat sizes, lack of critical mass, and distance from the nearest mosque.

Management did not get involved with the sale and letting of flats, but every prospective resident was interviewed by the supervisor. He claimed to have no grounds for exclusion other than unrelated adults sharing on split leases, and his system, while potentially open to all sorts of bias, had resulted in high racial diversity and low levels of conflict. An owner-occupier in a nearby building, and the elected chair of Ocean Way, the supervisor focused on creating a good atmosphere. He knew every resident by name or flat number, and strived to make sure that, regardless of background, all felt welcome and knew what was deemed acceptable in the block. CCTV cameras dotted around the premises were monitored from his office beside the entrance, which had one-way glass so he could survey the *cul-de-sac* and lobby. Nefarious activities (drug trading, soliciting) were detected early and quelled quietly. At night, a reception desk and visitor book were manned by a security guard, and the cameras monitored via an app on the supervisor's phone. During fieldwork, at least two security incidents were resolved from footage recorded on these cameras.

Ocean Way's original lift was still operating, and although it was slow and broke down weekly, it was always fixed within a few hours and the Board planned to replace it in the coming years. Otherwise, bar the rickety old timber windows, the building was well-maintained.

Attractive, L-shaped Carillon was built at least ten years after Ocean Way, and is roughly four times its size. The block has 92 larger flats and occupies a 2400m^2 site, resulting in a low density of 383 du/ha. Five flats on each floor are 2.5-beds, and the other two, 1.5-beds. The parking podium, entered from the front or back, wraps around the foyer, accounting for the level change across the site. Atop it is a layer of screened parking shaded by the building footprint, and a large communal washing line area.

All those I met here were owners who had lived in the block for eight years or more, in female-headed, inter-generational households with at least one working professional. All ages, races and religions were represented, and the building housed many young children and pensioners. The supervisor, an owner-occupier who appeared to be at the centre of the block's social network, was seldom in his tiny foyer office. 24-Hour security guards controlled visitor access to the entrance door, and monitored CCTV cameras from a small desk in the lobby. With 76 parking bays, Carillon has a high parking factor of 0,73, but this was insufficient for residents, many of whom owned cars. Those needing extra bays rented them offsite.

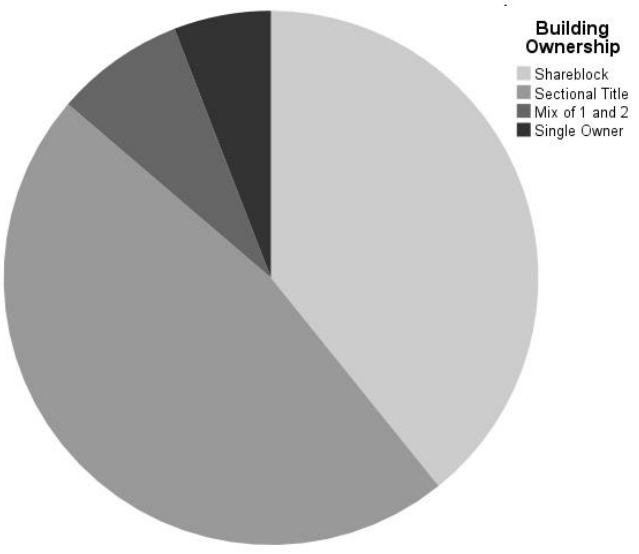


Fig. 146: Carillon's playful Tropical modern architecture is characterised by oblique angles and protruding fins.

These examples illustrate a wide range of situations found at building level, and the complexity of the variables—human and non-human, absent and present—acting on them. It is important to note that these building systems (hard and soft) are in constant flux, and many underwent significant change during the study period. Nevertheless, the holistic scenarios described here provide a good basis for closer examination of the separate building-level aspects.

Ownership Structures

Over 85% of buildings surveyed fell under Shareblock or Sectional Title ownership, or a mixture of the two. The rest were recorded as having a single owner, be it a company, institution, family or individual.



SHAREBLOCK (SB): The original ownership structure for all central Durban buildings, this scheme is retained in its entirety by a third (17 in number) of blocks surveyed. In this leasehold model, the land on which a building stands remains the property of the local municipality and is leased to a specially-formed company on a fixed term basis, in this case, 99 years. On registration, buildings were assigned a unique number starting with the year they opened, e.g. *Dunelands Shareblock PLC, 1959/2345678*. Ownership, or rather 'exclusive use' of a flat was secured by buying shares in the company, with larger units allocated more shares.

Few banks will finance SB flats, as the property is never owned outright, so they are usually bought in cash. This has a major impact on who can afford to own in a shareblock, as buyers need a large sum of money in one go. Most shareblocks are in good condition, and have a higher proportion of flats occupied by or used as second homes for owners.

A BoD comprising shareholders typically decides who is eligible to buy shares in the company or rent in the block, so this model was found to encourage multiple flat ownership for investment purposes, making a building more likely to be taken over (intentionally or not) by a single demographic group based either on class or religion. Once this starts to happen, flats seldom make it onto the open market, as those who already own in the block almost always get first option when a unit comes up for sale. This has clear implications for spatial justice; it favours the accumulation of wealth by those who already have it and works against transformation of the property market, making it difficult for new actors to step in.

Since tax breaks were discontinued in 2002, there are no longer fiscal benefits to owning in a shareblock, and the scheme carries a future liability: when a lease expires, the land must be bought from the municipality for a large sum and converted to sectional title, or it is ceded back to them. A distant future concern for some blocks, this time is looming for buildings that date back to the 1930s.

Two reasons were given for retaining SB status. The first, more common in well-run blocks with many owner-occupiers, is the express desire to retain control over who owns and dwells there.

June (75), who had lived in Yarningdale for much of her life, felt strongly about this. "'We are a shareblock and we will not change! A sectional title block allows anybody in who is able to get a loan, and as long as the loan is paid, the levies can and often do fall away, which is disastrous for building maintenance, water, lifts, and so on."

The second reason for retaining SB status is that there was never a need or desire to sectionalise, and the cost of doing so is prohibitive, especially for those already struggling to pay inflated levies. Fairhaven, for example, was embroiled in a legal tousle with EM after shareholders allowed a billboard to be erected on the building's side to raise funds for their coffers.

Said their lawyer: "The shareblock has been informed that the lease of the land from the City comes up for renewal and it wants the building to buy

it. The last price being bandied about was more than R5 million" (Broughton 2015).

SECTIONAL TITLE (ST): This is the standard form of ownership for flats in South Africa today, and was found in just under half (23 in number) of buildings surveyed.

Sectionalising a shareblock involves first creating a sectional title register, after which flats are converted individually at the owner's discretion and expense, usually when buying or selling. The piecemeal nature of this process means that at time of study, many ST blocks surveyed still had a few shareblock units.

Management of a sectional title building is via a Body Corporate comprising an elected Chairperson and several trustees who own one or more units. Flats are bought and sold privately or by agents on the open market, and securing a mortgage is similar to a traditional freehold property, except the bank examines the scheme to ensure the building is solvent and run properly.

Some ST blocks are in immaculate condition and support thriving communities, but others, where mismanagement has led to infrastructural breakdown and control of residents is lost, can quickly ghettoise and become uninhabitable for all but the poorest. In this dataset, ST high-rises with more than about 120 units proved significantly more difficult to manage and so were at greater risk of systemic breakdown.

Within the study area, I found sectional title blocks that were as high as 100% and as low as around 10% owner-occupied. It was uncommon to find ST flats standing vacant, and unusual to hear of prospective residents being interviewed.

MIX OF THE ABOVE (MO): This occurs when a building is only partly sectionalised, and so has flats falling under both shareblock and sectional title schemes. Management was typically via a body corporate, but retaining some old procedures and rules. Given the shift towards the latter, most mixed buildings in this dataset had more sectional title units, with one exception.

Doughnut-shaped 9-storey Shorelands on the North Beach frontline had a unique hybrid ownership structure found to have many benefits while enabling high socio-economic diversity. Operating roughly 55/45 (SB/ST), the block had run seamlessly for years despite employing no supervisor or security guards. Built by one Mr B, a Dutch immigrant who himself had lived there, over half the flats in the building still belonged to his family Trust, the administrators of the shareblock company. At time of research, his son, the Chairman, was in his 70s, lived in the building and saw to its day-to-day running. With no bonds to pay off, the family effectively acted like a housing association, providing affordable, decent accommodation to a wide range of tenants who co-habited alongside owner-occupiers and private tenants.

In this scenario, the shareblock company acts as an intermediary body, maintaining equilibrium between the interests of the building and those seeking housing, and those of property owners.

SINGLE OWNER (SO): This refers to a building owned by a single entity—a development or property company, housing association, institution, family or individual.

It is currently the ownership model for all student residences and social housing blocks, some retirement facilities, and most new private inner city rental offerings. The model was not found to offer any particular benefits for a building or its inhabitants. Rather, it restricted the resident body to tenants only, attracted people in the same income bracket, and perpetuated homogeneity. Maintaining a high-rise building is expensive, particularly when major work is required, so single owners may struggle to cover costs, making them more likely to cut corners, shirk responsibility, or act unethically.

Management

Running a residential high-rise is a complex task. Even within this small geographical area, no one solution will work for all. A good look at existing management structures does, however, suggest which mechanisms better support diversity, equity and long-term sustainability. First, we touch on two building types that were surveyed via FGDs, meaning participants did not rate the management. Then, a brief look at the lesser-represented operational models serves to introduce the management of shareblocks and ST buildings.

Pensioners living at Edenroc had only good things to say about their accommodation: the three daily meals and range of activities and spaces available to them—a games room, sea-facing terrace, roof gardens, live music and regular outings. During blackouts, a generator supplied power to the lifts and to the on-site clinic. Here, shareblock units are bought outright on a 'life remaining' basis and supplemented by hefty monthly rentals. At the time of research, all residents were White and from Christian backgrounds.

The two Parkview residents I spoke to were pleased with their quarters and the running of the place, but missed the social activities which had ceased due to lack of interest and/or funding. Both were anxious about the cost of living there. The man who owned his unit feared his State pension would soon no longer cover the levies and he could not afford to eat, and the lady renting repeatedly said how grateful she was of her daughter's support. Both had opted out of The Parkview's meals due to the cost, and because the dining times did not suit them. Each had a private fridge and kettle to prepare their own snacks. Neither minded the trickle of hotel guests with whom they shared the common areas.



Fig. 147: Ex-hotel The Parkview, looking down Gillespie St (left)

As heard, DUT's Baltimore Residence experienced some management issues, most directly or indirectly resulting from historically poor maintenance. The broken lift limited access for cleaning and waste removal, compromising hygiene and exacerbating pest problems. Students complained that there was no WiFi in the rooms, and that it never worked in common areas. The mattresses were bug-infested, the washing machine over-subscribed, and the gym equipment broken or stolen. DUT's new custom-built residences, they said, did not have these issues. Despite this, the students were happy with the security and Res Advisor in their building. Asked if they'd prefer to live independently, they unanimously said "No", followed by the refrain: *"Res Liiiiiiife!"*



Fig. 148: Baltimore (right) is located opposite the Four Seasons ex-hotel, recently converted to CityLife private rental stock and then bought by Student Central, a new provider.

The camaraderie between co-habiting students is shown here to easily compensate for imperfect living conditions. This was confirmed by students living in near-identical configurations in privately-run Wavecrest, where security was less formal but gaps were plugged by the block's strong social network.

Wavecrest had two new lifts, but the building's physical condition was poor due to plumbing leaks. The on-site supervisor did his utmost to respond to complaints, but could only report them to head office, which in turn responded slowly. This disconnect between a building's owner(s) and inhabitants manifests similarly to the absent landlord syndrome, except that here, the risk of ghettoisation is lower. A company that owns and manages a building may well shirk maintenance to increase profits, but is unlikely to let it escape control or degrade beyond repair, as they value their asset.

The benefits of a residential building being administered centrally by a body with a vested interest in both exchange and use value, are shown in the hybrid hotel model.

Milton (34) from The Oceanic Hotel and Suites was totally satisfied with management, finding them "very responsive". Here they enjoyed a generator and free, effective pest control. Next-door holidaymakers were occasionally rowdy, but this was offset by them having access to room service, housekeeping, the on-site pub, restaurant and pool.

In Tenbury, where I estimate 30-40% of units were holiday apartments let privately by their owners, interviewees also felt there were more positives than negatives to mixing in short-term accommodation. Seasonal flux meant they waited longer for a lift on weekends and holidays, but the block was relatively quiet at other times, and offered cleanliness, on-site laundry facilities, and a 24-hour front desk. Otherwise, Tenbury operated like any other block, with a supervisor who residents could email to report issues or request window-cleaning.

Several management issues were raised in two separate accounts of life in Hawaii, the three-building social housing complex in South Beach. Broken lifts and lax security were two, but the biggest complaint, as heard in Chapter 6, was the perceived corruption in admission procedures and the SHC's unwillingness to address grievances.

It must be qualified here that a SHC faces many more challenges in managing a block than a private company. As a State-subsidised entity bound to rent units only to eligible lower-income tenants for affordable (typically around 50% of market) rates, they are at high risk of non-payment by vulnerable middle-class renters with unreliable cash flow. In addition, rental social housing models are newer and less understood in South Africa, where home ownership dominates. During research, media reported SHCs

(including the one managing Hawaii) struggling to run their buildings due to rent defaulting for various reasons, among them that residents felt entitled to free housing or that their rent should go towards paying off their flat. I mention this not to criticise the State-subsidised rental model, which has proven to work well in many countries, but to clarify why a SHC might underinvest in a property or give preference to tenants they know will pay full rent on time.

This dilemma once again highlights the folly of clustering low-income residents together in a building, suggesting that mixed-tenure, mixed-income models will be key to more manageable, financially viable and spatially just local housing solutions.



Fig. 149: First Metro Housing's Hawaii complex: (from left to right) West building, vacant lot, Central and East buildings.

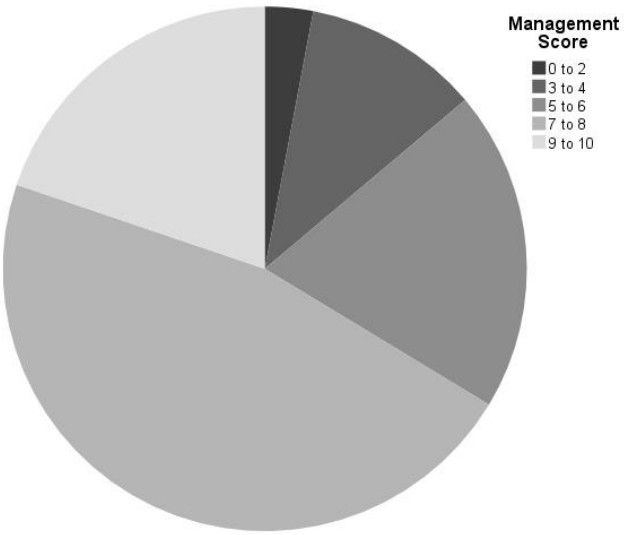
Having covered the lesser-represented ownership and operational structures, we will now scrutinise the management of properties falling under shareblock and sectional title schemes, and run as traditional blocks of flats. The two models of private home ownership might differ significantly in legal and financing terms, but were found to operate similarly.

Management Ratings

Interviewees were asked to rate the management of their block from 1 to 10, taking into consideration the managing committee, agents, supervisor, security, cleaning and maintenance. This proved difficult for many, and often entailed averaging out high and low scores awarded, for example, to a brilliant supervisor and a dysfunctional board.

It must be noted that one in five interviewees was connected to management—either they were the supervisor, a trustee, or family of one of these—so some bias is to be expected. Around half as many respondents were previously involved with running the building but had stepped down.

The notion of ebb and flow came up time and again. Many long-term residents referred to a recent improvement or decline in management, and said they would've answered differently if asked a few years earlier. Such ratings are subjective, reflecting one's own standards, expectations, housing priorities and prior experience, and up to a five-point disparity was found in the same block—a reminder not to give too much credence to any one opinion. Overall, two thirds of the sample were satisfied with their building's management, rating it 7/10 or above. Only those who gave 6/10 or below were asked to give reasons, but most did anyway, and the topic elicited some passionate opinions.



The five buildings awarded 3/10 or below by individual respondents were Mangrove Beach Centre, Elwyn Court, Hawaii, Northlyn and Beach Hurst. As heard, the first three buildings had major issues with broken elevators and poor security. The latter two appeared to operate fine, but both interviewees had a long history with the building and were at odds with current management.

At the top end, 20 respondents awarded 9 or 10/10. Commended here are Ocean Way, Maldonado and San Remo with two mentions each, but the clear frontrunner, with four mentions, was Yarningdale. Spread evenly across the study area, one in each neighbourhood zone, these buildings represent a small and a large sectional title block, and a small and large shareblock. No common threads were identifiable. This is almost uncanny given the random sample, but is perhaps a finding in itself, confirming that a building can be excellently run regardless of tenure or ownership type, size and exact location. Unpacking these ratings into their component parts might assist in identifying some of their secrets to success.

Managing Committees

The managing committee—the Board of Directors (BoD) of a shareblock or the trustees of the Body Corporate (BC) of a sectional title block—decide how

a building is governed, award contracts for services and maintenance, and account for funds garnered from levies. Broadly, they take care of the building's every day running [its use value] while a property agent is usually tasked with handling its fiscal and related legal affairs [its exchange value].

The four biggest property agents active in the study area are Wakefields, Tricor, Trafalgar and Maxprop. Like management overall, the landscape was dynamic and performance reports variable. In the few cases where a tenant dealt solely with agents, they almost always complained of incompetence, unreachability, or rudeness. Otherwise, agents were found to have little or no impact on the user experience of dwelling in a Beachfront high-rise, and were seldom mentioned, save by supervisors.

At one end of the operational spectrum, managing committees comprised a group of diverse, competent owner-occupiers acting in the interests of the building and its inhabitants, and working closely with the supervisor. At the other end was a committee of disparate owners, one or all of which didn't live in the building, some who were inexperienced or power-hungry, or acted solely in their own interests or for those of people they knew. The latter scenario was repeatedly found to breed dysfunction (bickering, egotism, nepotism), putting the committee at odds with the supervisor, residents or both. Left unchecked, this led to infrastructural breakdown resulting from foolish or insufficient spending, incompetent or unmanaged service providers, disappearing funds, or in a few cases, the inability to keep a supervisor.

Unlike shareblock directors, who can be difficult to unseat, body corporate trustees are elected annually at the AGM, where all owners can nominate and vote, so non-performing individuals struggle to hold power. Conversely, a new Board may not even have found their feet before they are uprooted. The following are some reflections on the management of socio-economically diverse sectional title blocks.

[Rating: **4/10**] "Maintenance has been neglected over the years. There is no follow-up on levies, and there is bias, for example people who owe R500K getting away with it but owners who are R10K in arrears being summoned. Those treated differently are more vulnerable and less law-literate, so they have no idea of their rights. I've only been the Chair for six months, and must not be biased, but some say they can see improvements and they'd like to extend our terms until certain historical problems are fixed."
~ Bencorrum

[Rating: **5/10**] "Every year the trustees change and the new Board wants to try different things. The current lot seem to have their heads screwed on; there's more transparency. Every three months we get a letter to inform us what's going on, so now we're more in the loop, [ ] but they need to build themselves up. [T]he old Board (up to 2014/15) were a good group and had things under control, I would've scored them 10/10, but they were all White and this building is mixed. Many were elderly residents, the previous chairlady served for 21 years. I had no issue with it, but a lot of people felt that Indians and Blacks needed a say. The transition guard came on board to spend money—it's an old building, so things like the lifts needed attention—but they spent it all on cosmetic renovations. They were chaotic, not hands-on, I would've scored them 2/10. But this new crew are like the calm after the storm and things are moving forward.'
~ South Sands

[Rating: **6/10**] "Over the years, the state of this building, the way it's managed, has dropped drastically. Take for example this one lift, I think it's been a year now it's not working. [ ] So they are not running it properly, the BC is failing us residents because we pay monthly levies for maintenance. As building occupants, we have our own valid concerns, but they're not very responsive, they don't listen effectively to us, although we do attend meetings. [ ] We have a residents' WhatsApp group where we communicate and some discuss their concerns. I would say 70% of residents are unhappy with the BC, and I'm one. Otherwise, I'm happy with security and cleanliness, they're all good and professional within their means. And I get along well with the supervisor, she does her job to the best of her ability given that she has no power or say in the overall running of the building."
~ Belmont

[Rating: **8/10**] "I'm a trustee, so although everything basically runs efficiently, I see the inner workings so I know we do have our issues. We have a high intake of immigrants renting here—lots of Pakistanis, Ethiopians, Somalians, mostly Muslim. We'd like to be more open, but we have a lot of slumlords [ ] who don't care about the condition of the flat, it's like a hovel. They rent to anybody, and units are never inspected, cleaned or renovated. A lot of the owners are from upcountry, but some live on the Beachfront in much nicer blocks [ ]. Our occupancy limits are 4pax/flat, but we've been on many inspections and found 10 or 12 people in there. The absent landlords don't care, aren't interested, and their tenants don't follow the rules or read the signs or letters. We complain to Wakefields but they are ineffectual, and lots of owners just don't bother to pay levies. We've tried to take legal action but never win; we just end up with huge bills and nothing changes. We have an off-site Chair who I haven't seen for four months, and another trustee who doesn't conduct himself in a business-like manner at

all. The supervisor [ ] basically manages the building—the staff, cleaners, security. She does a wonderful job."
~ Marine Sands

These examples touch on the same challenges raised repeatedly in interviews: racial transformation in management, the maintenance and upgrade of old infrastructure, a lack of transparency or consultation, and untouchable, absent landlords. These challenges appeared significantly diminished in the shareblocks surveyed, many of which seem to have changed very little in the past 25 years, bar a slight darkening in the skin tone of residents. A few interviewees said they would never live in a shareblock, as they did not want to be interrogated by a committee, have their every move watched, or be told who could visit their flat. Shareblocks tended to highlight the disconnect between old and new dwelling paradigms.

[Rating: **6/10**] '[T]he governance is very poor; they have a strange, ad-hoc way of doing things. Our first few years were a dream, but because of absent shareholders, space was made for a psycho to take control. We have lots of visitors and it's a big issue, partly why we ran into trouble with him. [ ] We employ two helpers during the day and they're not allowed to stay overnight. We pay levies for six people, and occasionally when we've had more we paid R100 pp/night, but he decided to reinterpret the rules—refusing access, restricting us to registered residents only. He said: 'We don't want people like you here.' He called us an Irish and a Muslim terrorist! They don't like to communicate. It's not necessarily incompetence, I think it's deliberate and does have value. 'No flats to rent, we're not interested in speaking to you!' It's a kind of fortress mentality. They should really be trying to attract more people like us, but at the same time it has a certain functionality in terms of keeping the place stuck in 1985, I guess to retain the things we've been discussing—security, price point etc."
~ Fairhaven

Another interviewee, a Xhosa lady who had lived in the building ten years earlier, had had a similar experience: "Fairhaven started to get oppressive, they were on your back all the time when you had visitors. Living in the city you want to live your life, find yourself, be independent, and when the rules are so strict, it brings back the traditional family life where people are always on your case. Here [Whitehaven], there is nowhere for kids to play, so sometimes if they are making noise in the corridors the neighbours will yell at them to be quiet or occasionally complain, but it's not like the supervisor is banging on your door every five minutes or giving you fines or warnings… there is tolerance, there's understanding."

This interviewee did however feel that Fairhaven's management was superior to Whitehaven's in terms of security, maintenance, resident conduct and landlord accountability. This suggests that integrated future housing, instead of adopting one of the two existing ownership structures, is more likely to succeed if it combines the positives of both into a new model.

Rules and Regulations

The primary mechanisms of residential high-rise management are its house rules, particularly those dictating maximum occupant numbers and permitted behaviour standards. So far, we've seen myriad dissimilar realities unfold within widely differing regulatory frameworks. In some buildings, rules are enforced to the letter, in others they feel flexible, and in a few they are treated as guidelines or ignored altogether.

Generally, house rules have stayed largely or exactly the same since these buildings were built, reflecting old-fashioned ideas concerning order and decency. One rule states that all flat curtains must have white backing. This, I was told, is a municipal bylaw, explaining why it is still common practice today, however questionable, or difficult to enforce. One could tell by the curtains, said one respondent, which flats—and consequently which blocks—were cared for by their owners. In some blocks, house rules had been updated to include the bias of the current leadership, for example, *'No walking barefoot or shirtless in the lobby'*—directives that were frowned upon by some younger residents, who called them 'ridiculous' or 'archaic'.

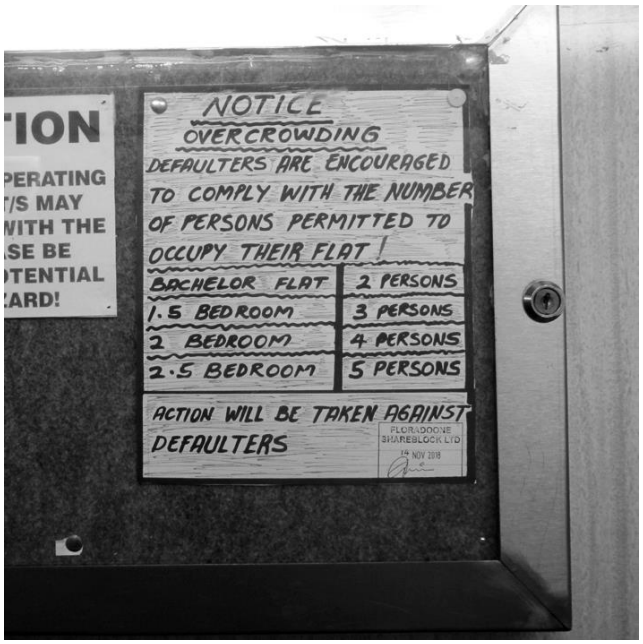


Fig. 150: A politely-worded notice inside a lift car, Floradoone

One shareblock director I interviewed was eager to talk about their building's strict admission procedures and rules.

[Rating: **9/10**] "[E]veryone that moves into this building, whether you buy or come in as a tenant, has to go through an interview process and we are *very* sticky. If we feel you're not going to fit in and have a good enough reason, we will not let you in. For example, someone will say, 'There are two of us moving into a 1-bed flat.' That's perfect, then they say 'and we're going to have a maid in here to look after the children.' [ ] We consider children people, so we've had incidences with four or five wanting to move into a flat where the limit is three. Our main concerns are [occupant] numbers, and can they afford to stay here, will they pay rent. We try to discriminate against smokers, we let them in but under very strict rules. [ ] And you have to be a naturalised South African. We do take students, but we check references carefully. We phone the place where they stayed previously and get a letter from their school [ ] or an employer."
~ Dunelands

Here, original occupancy limits are strictly enforced, as was the case for most blocks in the northern half of the study area. Blocks In the southern half were considerably more flexible; those with many renters particularly had relaxed occupancy limits. Dunelands was not the only block with a 'No Foreigners' policy but was the only one to explicitly mention it, and I did not enquire into the reasons. In the middle of the study area, the BC of one sectional title block had found a balance between flexibility and blind enforcement of rules. Their hands-on, transparent management style had helped the community there to grow.

[Rating: **8/10**] "We're a mixed Board, but we work well together. Unlike other blocks, we're all friends and effectively meet daily. [ ] We have about 25% owner-occupiers, the rest are tenants, and nearly everyone is working. We have quite a few shift workers who share a flat, they rotate, so when one's leaving the other's coming home. They do it to get past occupancy limits so they can make the rent, because rents are exorbitant. They say they're family but it's easy to deduce. We do suspect it, but we leave it—you're not causing a problem to anyone, you're earning a living—but it *is* against the rules, so there's a level of flexibility and tolerance until we can prove it, then they must make alternate plans. [ ] Some units here are totally neglected by owners who rent them out, they don't care as long as they get their rent… that's also why we do the interview. [ ] We orientate all prospective tenants and new owners, and everyone's expected to abide by the same rules, especially with respect to occupancy. The minimum lease is six months, and if tenants don't behave we kick them out… but that's rare, people tend to stay a while and many have been here for years."
~ Willsborough Mansions

An interviewee in Protea who was very happy with the shareblock's management and tight, two-tier security, was nevertheless perplexed when he was forbidden to host a Bible study in his flat. We've already heard from residents in well-managed blocks who don't face such constraints, for example Jamila and her gatherings in Tugela, and I was told how Frank had hosted a friend's wedding reception in his Shorelands bachelor. But anything more akin to a traditional night-time party with music, drinking and maybe dancing, was frowned upon across the study area. It is assumed that those who enjoyed entertaining had accepted this. Like with pets and parking, we can only speculate how many people choose not to live in a flat because of such rules.

Said **Peter** in Sahara Sands: "I don't like living in a flat, you're restricted, you always have to consider the people next door. Also in terms of noise and space; in a flat there's a BC in charge of you even if you're an owner, and they also control visitor numbers." He sang the praises of building management, and had no problem with any specific rules, he just preferred the autonomy of a house.

A young Zulu professional who'd lived happily most of her life in her mom's South Beach flat said they soon planned to move to a suburban garden complex for more space and some "peace and quiet from the taxis". But there was another reason, too.

[Rating: **4/10**] "[S]ometimes I want to have people over and have a braai in my own space, maybe ask them to stay over, and I feel I can't do that here. It's very uncomfortable having visitors, they must respect the rules and sometimes people don't *get* that you can't stomp on the floor while laughing loudly at something, jump up and down or make noise past a certain time. Not everyone who comes to visit you has grown up in a flat and understands what's expected. [W]e had two big birthdays this year [ ] so it would've been nice to have my whole family here… [ ] from townships, from the rurals; I would've liked to have a party, but it's not practical because of the rules. Some people might want to stay over, then it becomes an issue with overcrowding, with occupancy."
~ Carillon

This experience and many others touch upon the mismatch between rules formulated many years ago for one way of dwelling in a city, and the kind of environment that supports modern South African living, especially for young families and those hosting friends and family from outside the city. All accounts show an understanding of why such rules exist and their role in maintaining order and liveability in a block, but also point to a pronounced lack in two specific areas: space where children can play freely, and a place where residents can host larger gatherings. We will revisit this in the next chapter when examining social infrastructure in these high-rises.

Supervisors

In theory, the role of a building supervisor is to act as an impartial liaison between management and residents, monitor comings and goings, complaints and house rules, log maintenance issues, and manage staff and contractors.

The supervisors encountered here came from all walks of life. At one extreme, a supervisor travelled in daily from peri-urban Inanda to work in a tiny office in the parking lot of a humble South Beach block; at the other, a retired Engineer and Chair of a pristine North Beach shareblock busied himself carrying out all the duties of a supervisor and more, while dreaming of a pop-up extension to his top floor unit.

In all but exceptional cases where their functions were performed by other on-site personnel, supervisors were found to be indispensable to a smoothly running residential high-rise. Some large blocks like Grosvenor Court and Bencorrum had two or three administrative roles, with the usual hierarchy being Building Manager, Supervisor, then Caretaker. Occasionally, the chairperson was more active in day-to-day operations and had a desk in the office, too.



Fig. 151: The supervisor's office sandwiched between two lifts in the original-condition grand old foyer of Ottawa Court.

I learnt early on that a supervisor is a good indicator of how a building is run behind closed doors. If they were suspicious, fearful, or dismissive of research activities, it usually meant that management had something to hide, or that the supervisor was disempowered and so disinclined to use initiative or make even small decisions. An empty supervisor's office, even for a short period as the post requires a stand-in during leave, points to issues with the management.

Supervisors kept regular work hours (8am-4pm). Mornings were busiest, sometimes starting as early as 7am, and lunch and tea breaks were observed with near-religious rigour.

In around half the blocks surveyed, the supervisor was an owner-occupier, often an older resident and committee member. This arrangement, found equally in SB and ST buildings, worked well, and appeared to result in the least day-to-day conflict. A proactive owner who has lived in the building for years will know the ins and outs of the physical structure and the people who have resided or worked there, providing continuity in both knowledge and human relationships. Importantly, they have a vested interest in making sure the building provides a decent, pleasant living environment, as it is their home, too.

When a supervisor did not own (an 'outside' supervisor), it was still the norm for them to live on-site in a dedicated flat, alone or with a spouse.

I noted a marked difference in the way outside supervisors were treated by managing committees, and sometimes by residents. Three supervisors described elaborate ways in which a new committee had tried to force them out and replace them with someone of their own choosing: by making the job unbearable, bribing them with a large sum of cash, or framing them for theft. Some outside supervisors described the verbal abuse they endured, but I was shocked to witness such an incident first-hand.

While I waited in the lobby of a North Beach shareblock, a man who looked to be Muslim and foreign-born marched into the supervisor's office in plain view of everyone, and launched into a tirade. He shook a finger at the small man, swore at him, threatened him with dismissal, violence, then death, and stormed out. The mild-mannered Afrikaans supervisor barely flinched; this clearly happened a lot.

The exchange left me wondering whether normalised, aggressive conflict, and the tendency to just accept it, might be a legacy of apartheid. It recalls Simone's (2005) observation on the arguments around contested space in South African cities, and raises the issue of gender. A quick count revealed twice as many male as female supervisors in the buildings surveyed, and while accounts of verbal abuse were restricted to North Beach, a few South Beach supervisors reported being threatened or assaulted by tenants who were being fined or evicted, or for some other perceived ill-treatment. It is understandable why some might deem the role more suitable for males, but a handful of (younger) female respondents believed this was sexist, or the misguided directive of an all-male Board or misogynist chairman.

Turnover of outside supervisors was high, and several changed during the research, with one lady supervising three different blocks in this time.

Building Condition and Maintenance

A building's physical condition—its infrastructure, appearance, cleanliness and capacity to provide a safe place to dwell—is the primary dictator of its exchange value, and depends largely on building-level governance. At the start of research, there were

two visible external renovations taking place, but by time of writing I estimate around half the buildings surveyed had received a facelift. Most interviewees were less concerned about cosmetic renovations than about essential maintenance affecting their daily lives. A handful of respondents perceived the way they were treated by management or expected to put up with poor quality housing as an injustice.

> [Rating: **5/10**] "The cleaning is not great, and there is no accountability for building maintenance, for example our leaking toilet. My landlord says to speak to the supervisor, and they say it's not their problem, it's a building problem, so it doesn't ever get sorted out. And there is always a delay in fixing the lift, it seems there's no follow-up, no-one to push. It's currently down from water damage, it happens whenever there is a big rain. It's been a month now, they say they are waiting for insurance or parts, but I feel like if this building was in a different area with more Indian or White people, this would have been fixed in a week or two."
> ~ Capella

This respondent alludes to the racial divide between North and South Beach, and the perceived continuation of the apartheid notion that differential standards (of housing, servicing etc.) are suited to different societal classes. His perspective on building condition and maintenance captures well the fragmentation that can occur quite rapidly in a ST block. When there is no single force holding together individual stakeholders, it becomes easier for owners to shirk or defer their responsibilities. Another tenant nearby rated the on-site management of his building very highly (9/10), but was visibly upset by its poor condition and off-site management, rated 3/10.

> [Rating: **6/10**] "The building is undermaintained. There is stingy spending of our levy money, it is poorly painted, very shabby and doesn't look like a building should on the Beachfront where there are tourists. The plumbing is very old and needs attention, and workmanship is poor. Security and cleaning are great, but the BC trustees and Maxprop are useless, there is no consultation. We should have at least quarterly meetings to voice our concerns."
> ~ Sandringham

Absent owners, believed this man, were largely to blame: "If it affected them, they would care more. [ ] We've got visitors, respectable people coming here, and look at where we stay... it is a *jondolo* [shack], it does not fit us! It is as if we are squatting, not residing. If they cared about our dignity, they would've done something."

Like several others, this respondent also made the link between a building's condition and its vulnerability to natural disasters.

"Our building doesn't feel safe at all. There are lots of cracks and also spalling, so that's terrifying, and the stench from faulty sewer pipes means something's not right. [ ] One earthquake and a tsunami and we'd be gone!"

Participants framed their concerns through past experiences, particularly those who'd watched cracks appear or pieces fall from a building.

"This worries me a lot, because the building is very old. There is proof, we've had an earthquake and it left some cracks in the building and undercover parking," said **Senzo** in Bencorrum.

In North Beach, **Abdullah** was similarly alarmed by the 2017 mega-storm: "[A]t The Oceanic, I was standing at my window with the rain hitting the glass and water pouring through into the lounge, and watching MBC, and a gust of wind sucked a whole big window frame out and down. [ ] Most buildings here are very poorly-built, and when people replace windows and things they use cheap, low quality materials, which is not good. In this area they also get corroded very quickly. I drove past Sahara Sands after that storm and almost every single passage window was lying broken in the carpark. [T]he signs are there, with climate change we really need to start gearing up, especially in these buildings—they're too old, we can't cut costs."

Living in a tall building beside the sea, many respondents were keenly aware of climate change. The two biggest fears reported here were being subsumed by water (tidal wave, flooding) or crushed in a building collapse (earthquake).

Gary (61) in Montezuma was not optimistic for these high-rises: "Nobody knows about rising sea level better than me. When I started metal detecting you could walk around this pier at low tide; now you can't. I made a mark in the middle and since 2013 I've seen probably 50-60m horizontal rise. [ ] Want evidence? Look in our lift wells, they're flooded. Like plenty of Durban blocks, the groundwater is getting higher and higher. Maybe one day we'll have to abandon these buildings, they'll just be too dangerous."

Faylin (47), who regularly ran up and down 20 flights of steps to his flat in MBC, did not fret about the dire lift situation or rising seas, but worried about drought and the water supply. "When the electricity goes off, the water goes off, as water is pumped up here. In a way it's tied to infrastructure breakdown, but even when there was loadshedding, because of our location and [ ] the tourist industry, it feels like we hardly got cut off. [ ] Getting stuck in the lift is not really a worry, that'd be a good meditation, but sometimes the water coming out of the taps is brownish and I've heard the tanks on the roof are open to birds, so I boil my drinking water."

Shorelands' hybrid ownership model was found to influence maintenance at all levels, from decision-making at the top to the structure's daily care. The

building looked worse for wear at the start of research, but received a deep renovation in 2018—spalling concrete repaired, facebrick sealed, and plaster panels painted in chequered greys. North Beach's 'ugly duckling' suddenly had people stopping to take photos, and residents reported an elevated sense of pride in where they lived.

This costly but essential renovation, paid for by special levies imposed on all flat owners, would likely have been put off longer if not for the fact that the shareblock company, run by a family trust, absorbed half the cost. They also retained the power to decide when and how renovations took place, and to select and oversee competent contractors.

The work spearheaded a wave of similar renovations in the study area, with many opting for grey palettes instead of the usual warm peaches, yellows and beiges—a current trend, but also possibly an urban scale example of wanting to keep up with the neighbours.



Fig. 152: What appears to be just a new paint job was in fact the last layer of the building's essential structural renovation.

Shorelands employed five full-time caretakers, all Zulu men who'd worked there for years. One stayed on site to attend to spare keys and after-hours emergencies, and the others commuted into town daily. Between them they saw to interior painting, unit maintenance, gardening and cleaning, working together to ensure the block's smooth running and to assist residents. Strong support networks and relationships had clearly built up here, and one or more of these staff could well wish to live in the block if able to rent or buy an affordable unit. This raises the issue of on-site staff accommodation in residential high-rises.

An Apartheid legacy is the servants' quarters found in almost all blocks of flats here—rows of basic rooms with high level windows, sheeting roofs and shared ablutions, located in a separate outbuilding or atop a rear parking structure. Most caretaking staff live on-site in these conditions today, and some blocks with abundant rooms place domestic workers there at their employer's expense. All such quarters I saw appeared fully occupied. This has a strong bearing on spatial justice, as it implies the segregation of two different classes of people in dwellings of highly disparate quality on the same site. The mere existence of these quarters permits, if not encourages, the continuation of highly unequal employment practices that make it easy for low-income workers to be exploited. Spatial injustice, reinforced by built form, self-replicates here. New housing forms must strive to break this cycle by creating a scenario whereby someone who is hired to fix, clean or protect a residential high-rise can also choose to live there with their own family.

Circulation

The systems dictating how people enter, exit and move around a high-rise apartment block are best examined as an integral part of the building. In the design stages, the type and extent of circulation is specified in response to building size, configuration and anticipated density, and hinges on two critical factors: who gains access to a premises, and how quickly occupants can escape in an emergency. A look at how circulation systems have responded to changing circumstances should suggest a good starting point for future developments.

Access and Security

One in five respondents cited safety (of self and home) as their favourite thing about their building. Barring a few performance gripes and some isolated breaches, security systems all over the Beachfront were found to operate effectively, and very few interviewees felt unsafe once inside.

A block's main entrance typically had one or two glass doors with magnetic locks controlled by swiping plastic discs, and sometimes also a gate. Over 80% of buildings surveyed had 24-hour unarmed security personnel seated at a reception desk or in a booth at the entrance, managing access for non-residents. In about half of cases, CCTV cameras monitored the common areas. In all buildings with security guards, visitors were required to sign in with a name, phone number, flat number and arrival time. Departure time was filled in by security on exit, and a few blocks had a separate sign-in book for staff such as domestic workers and contractors. Intercom buzzers were usually found inside the secure zone, and in bigger buildings were controlled by security.

Nine of the 51 buildings surveyed had no daytime security. In all but three of these, supervisors could monitor the entrance doors from their office and let people in or out, and a few employed a night security guard. I don't believe security personnel were ever expected to confront or apprehend intruders or

criminals, but rather served to alert more equipped operatives like their armed response unit or the police. As seen in Wendover, people-free entrances work fine in small blocks with low traffic, but they can become risky over a certain size as few residents will stop a stranger following them into the building, preferring to avoid conflict. While people-free access is generally ill-advised in this context, in one case a combination of building typology and the presence of on-site staff rendered formal security redundant. The design of the building, with its internal, wraparound, open walkways, promoted passive surveillance.

"I like the doughnut layout, as it results in good visibility. If there's a problem, you just step out into the passage and can see others," said owner **Ali**.

During the day, the front gate and one glass door were unlocked for guests to access the buzzers, but after hours all three were locked, and residents had to let visitors in. At night, a plainclothes watchman patrolled the premises with a baton and cell phone to deter would-be criminals and report any issues.

Despite its many units and high rental turnover, most residents here had a sense of who was allowed to be in the building. Said tenant **Cora**, who worked from home: "I feel incredibly safe here, more so than anywhere else I've lived, primarily because of the staff. They are lovely people, all friends, and are very aware of all movements, so before someone can get to me, they must go through at least four doors and sets of eyes."

This demonstrates not just the power of good architectural design to bolster passive security, but also the value added by a built-in community, regardless of how it is comprised.



Fig. 153: The Courtleigh Heights lobby just before Christmas.

Despite very low home invasion levels in the area, around 40% of participants worried about break-ins. Most were just cautious, but some lived in buildings where security was patchy, they didn't trust the neighbours, or they'd had a bad experience. I heard several accounts of brazen housebreaking methods.

"Two weeks ago, someone walked in past security with a bolt-cutter, signed in, went up to the 4th floor, cut the padlock and cleaned out the flat using backpacks. It was an inside job," said **Senzo** in Bencorrum.

Three blocks had fallen prey to the 'Mover Gang', a team of overall-clad thieves who enter a flat where no-one is home and 'relocate' its contents. In Ocean Way, two uniformed policemen entered through the foyer, broke into a flat and stole valuables, and a Carlton Towers resident described how thieves got onto the roof, abseiled down into a high-ranking policeman's flat, and stole firearms. This, too, was clearly targeted crime. **Aamena** in Stromboli and **Milo** in Grosvenor Court both told of cat burglars who'd tried to climb into flats via ledges and drainpipes. In both cases, the perpetrators were young men who resided in the block and had drug dependency issues.



Fig. 154: It would take more than bravery to attempt to scale Stromboli's façade with its flush floor-to-ceiling glazing.

A final building-level security concern was vehicles being hijacked while entering or exiting the premises. Prior incidents or attempts had occurred at the back of Courtleigh Heights, Althea and Grosvenor Courts, and Carillon. These buildings all have remote control access gates set back from the road on a blank façade, and none have a clear sightline from flat windows—a configuration that aids would-be hijackers, but which was seen in most buildings in the dataset.

Elevators

As heard, the biggest infrastructural challenge for high-rises in the study area is old elevators breaking down—something that will not carry over into future developments if the right equipment is installed, used correctly, and maintained—but findings do start to

suggest which vertical circulation solutions work better in this context.

Two thirds of buildings surveyed had two lifts: one solely for passengers, and one for goods and people. Seven of the 51 buildings, all pre-1955 structures, had only one lift, and 11 larger buildings, three or more. On average, one elevator car appeared to adequately serve around 50 units, assuming all lifts in a building were working, which was seldom the case.

During apartheid, service lifts were dedicated to the transport of goods and non-White workers (maids, deliverymen etc.). Today, most buildings still restrict those doing heavy-duty work (movers, builders etc.) and their equipment to the service lift, but circulation is no longer segregated by class, race or other social markers. Some buildings charged residents for moving furniture in the goods lift, typically a one-off sum of R200-R300, to compensate for wear and tear. In some bigger buildings the service lift had a separate shaft elsewhere in the building, and where lifts went down into basement or podium parking garages, they sometimes needed a special access key or disc.

In Belmont, an unsecured goods lift opened into the passage of the entertainment mall downstairs, causing serious safety concerns. In MBC, anyone could wander off the street into the basement parking and up into the residential tower. In both mixed-use buildings, these problems were attributed to conflicts of interest and poor co-operation between the single owner of the commercial podium and the body corporate of the ST block upstairs.

Skip-stop elevators were found in only three buildings. In Carillon and Groote Schuur, lift cars opened on alternate floors, one serving even and the other odd-numbered floors, but by time of writing, one was undergoing conversion and the other in planning to do so. Supervisors cited user convenience as the driver in both cases. In Port O Durban where all flats were duplex, lifts opened onto sunny double volume lobbies at every second floor.

An estimated two thirds of lifts in the blocks surveyed were the originals installed during construction, and bore tarnished nameplates with the brands Otis, Schindler and Kone. The oft-heard phrase 'waiting for parts' was quickly understood to mean outdated machine components were being shipped from Germany. All but one of the single lifts were found in working order, and when they malfunctioned, single lifts in well-run buildings reportedly had the fastest response time from mechanics. In buildings with three or more lifts, it was normal to find one out of order on any given day. Broken and unreliable lifts elicited reactions ranging from mild irritation to seething anger, but it was building staff who, as one guard put it, "lived the nightmare", running up and down to press buttons, rescue or pacify stuck passengers, and fielding irate residents demanding to know when the problem would be fixed.

Working elevators, this study confirms, are crucial to the liveability of a residential high-rise, and when they break, the worst affected are the elderly and mobility-impaired living higher up.

Sandra (77) rented a sky-level flat in Connemara, where only one of three lifts worked: "[It] breaks down at least twice a day, sometimes more, and it's the only one serving 156 flats… it's dangerous. They only allow four in at a time, so at rush hour they give you little tickets. [ ] Because of my rheumatoid arthritis I can't climb stairs. A few weeks ago, a man in a wheelchair and I sat down there from 17h15 to 23h45, but they never got it going. He went to stay in a hotel, but I had no money on me, so I had no choice. Security helped me up, one guy with me hanging on [a rail] in the middle. Someone lent him a folding stool, he made me sit down every two floors to rest, and even massaged my leg. You must *see* the size of this guy, he's tiny, *and* he was standing in for someone on leave."

This is a prime example of how human intervention and kindness provides continuity when infrastructure breaks down.



Fig. 155: By 2008, both lifts in ex-Council block Elwyn Court were defunct and its kitty empty. Piecemeal renovations to the structure began in 2017 as funds came available from the repossession and auctioning of flats, and by 2019 the block was gated, access controlled and had two new lifts.

Most new elevators were installed in the decade prior to interview. In Key West, the wrong size car had reportedly been installed. In MBC, two interviewees suspected the newest lift was entirely the wrong type—one intended for moderate use up to 15 storeys, rather than a high-speed lift for intensive use in a building this tall. Montezuma had ongoing problems calibrating between old shaft mechanisms and the two new cars, partly because the Board (commendably) had opted for an energy-saving system whereby only one car can be called at a time.

This prevents lifts riding aimlessly and wastefully up and down when someone pushes both UP and DOWN call buttons, but the system does not work when users hold the door open, as the second car remains stationary until it closes. Lift-holding was a common behaviour that indicated a lack of consideration for others, and I noted a general lack of awareness as to how elevators work. Residents were often seen pressing call buttons repeatedly or holding them in, as if this makes a car arrive faster. Incorrect usage like this puts strain on shared equipment, highlighting a need to better educate high-rise users.

During fieldwork, at least nine lift cars were replaced in the buildings surveyed. In only one building was everyone happy with the elevators: "We have the best lifts, beautiful! Ours are fast, efficient, and never get jammed… they're excellent compared to what I've seen everywhere else," said **Laila** in Marine Sands.

Curious, I made some enquiries. The 17-storey building's 128 units are served by three lifts housed in a single core, and the old Schindler goods lift is used infrequently. Both passenger lifts were replaced in 2010 with Brilliant cars, designed and made in China, installed and maintained by Durban company Hoistmaster.

Stairs

Interviewees were asked whether they used the lift, the stairs or both, under what conditions, and how long it took from entering the building to reach their flat. Two respondents lived on the ground floor, and of the 12 who used only stairs, eight lived on the 1st floor, one on the 2nd floor, and the other three in buildings with defunct lifts. Of the 47 interviewees who relied solely on elevators, all lived on or above the 5th floor, bar two with impaired mobility. The other 40% of the sample sometimes took the lift and sometimes the stairs. Dual users peaked on the 4th and 5th floors and tapered off after the 13th floor. Reasons for using both circulation modes included exercise, time saving, chance ("If the lift's there, I'll take it") or coming in from exercise wet and/or sandy. Many preferred to walk down in the morning and catch the lift in the afternoon when tired, carrying parcels or accompanied by children.

The average time taken to reach one's flat was around three minutes, but a few said it sometimes took up to an hour, either due to lift issues or because they stopped to collect post, chat to staff, or visit a friend. Main stairwells in the buildings surveyed were not very pleasant spaces, and did little to encourage their use. Seemingly designed only for emergencies, most had small or no windows and relied on artificial lighting, posing an added problem during blackouts. An exception was Montezuma's generous open stairwell with a central void, naturally lit by a glazed south wall.

Residents often used the FE stairs which, although plainer, steeper and seldom compliant with modern safety codes, also tended to be lighter, airier and free from foot traffic. External FE stairs were used often as shortcuts between flats, and as break-out spaces for smokers, teenagers and children. Breezeblock walls, when present, offered both protection and visibility. In this way, semi-private circulation spaces were co-opted by occupants to serve everyday practical and social functions that outweighed their primary intended use.



Fig. 156: A quirky rubbish chute, planters on landings, and bright yellow nosings and handrails make this stairwell inviting.

The 2017 blaze that killed 72 people in Grenfell Tower, a West London Council block, is thought to have started in a home appliance and spread via the combustible cores of new façade cladding panels. A few respondents recalled this incident, but there seemed to be an understanding that Beachfront blocks are at much lower risk of such a disaster, as their construction methods and the open-air nature of most passages and FE stairs do not support the spread of fire.

While most interviewees had experienced at least one building fire, around half didn't worry about this, and a quarter, just a little. The 20% who worried more, either didn't believe their fire-fighting equipment or escape plan was in order, didn't trust neighbours with open flames, or feared residents would panic in an emergency. Worry of this type was fuelled by high indoor density, the presence of many vulnerable residents, dark or narrow escape stairs, and locked or obstructed exits.

The other reason respondents had evacuated was due to earthquake. Only one interviewee knew that the correct response in this situation is to stay put and take cover.

"[T]he last earthquake we had, I was in the lift with a Portuguese guy and a Pakistani guy. On the tenth floor the lift was swaying from side to side, the Pakistani dropped to his knees and started to pray, the Portuguese looked at me and said 'Okay Ma, I'll take care of you,' and pulled the door open. We heard screaming like never before. Every single person in the building was running down the stairs… it was evening, so in all states of undress. I stood by the window outside the lift and lit a cigarette. Two footballers were coming out, too. I said, 'Come stand with me', so the three of us stayed while everybody else literally fell downstairs."

This highlights a need for better emergency preparedness in local residential high-rises.



Fig. 157: The open FE stairs in Floradoone's courtyard; White painted slabs express the structure visibly in a rhythmic way.

To see if a correlation could be found between the height of a resident's unit and their combined level of worry about fire and natural disaster, I calculated the mean score for each floor. The highest score (1.3/3) was found on ground and 1st floors, followed by the 2nd and 9th floors (1.2). Contrary to expectations, this research suggests that living higher up in a tall building near the seaside is likely to make one feel safer from, rather than more vulnerable to, such disasters.

Conclusions

Building scale investigations reveal a full range of 20th century architectural styles inside the study area. Built for a privileged class under an oppressive regime in an unequal urban landscape, these blocks have endured unprecedented transformation to provide safe and convenient housing for all types of modern city-dwellers.

The gradual, piecemeal way in which the Beachfront developed into a high-rise residential strip resulted in a wide variety of structures in terms of bulk, form, height, density and occupant capacity. This, I argue, smoothed the change from resident homogeneity to heterogeneity, from social segregation to integration. What is needed now is the spatial counterpart: architecture that reflects this positive transformation and its accompanying multiculturality. Future developments must respond intelligently and humbly to their immediate surrounds, aiming to roughly mirror the scale, height and density of adjacent buildings on each side, with new bulk placed in consideration of sun paths, views, overlooking and overshadowing.

At ground level, buildings with permeable, active frontages that engage with the street were found to integrate better with the public realm than those shut off with walls, fences or parking. Typologically, tall buildings that internalise circulation so residents can see each other moving around—doughnut, C, and J-shaped blocks—work much better for passive surveillance than linear designs, as they create a semi-private protected realm. Rotating all or part of a building footprint, or introducing gentle angles in plan or elevation, can serve to augment these massing and planning techniques, and add character and variety.

No existing ownership model was found to be without limitations, but all encouraged clustering of like sorts of people. Some building populations were indeed diverse in terms of age, race, religion and nationality, but it was rare for those whose SES differed significantly to dwell under the same roof. Any future proposal for mixed-income housing would be wise to ascribe to a new hybrid ownership model that builds on the successful aspects of existing ones, ensuring the resident biodiversity that, I posit, is so important to the long-term socio-economic sustainability of the resultant ecosystem. Generally, shareblocks tend to be better-maintained and house more affluence, but the model enables the creation of an exclusive group that can be inaccessible to newcomers. Conversely, well-run shareblocks make it harder for absent owners to default on tenants, overcrowd a unit, or install badly-behaved renters, as they will likely be called to account by resident shareholders. This model, while not a future prospect, offers insights into effective management and highlights the benefits of a building being owned and run by one cohesive collective body rather than a host of independent, loosely-connected stakeholders.

While the relative freedom associated with sectional title units is more appealing for most, and their eligibility to bond means they are accessible to a wider range of buyers, ST blocks can be difficult to manage when they are over a certain size and/or have many absent owners. Here, positive change in a block appears to be contingent on a critical mass of residents who've lived there long enough to consider it home and are invested enough, financially or

emotionally, to get involved. This suggests that a mixed-tenure model consisting of some owner-occupiers and at least some long-term renters is best placed to deliver and sustain the required balance between ease of management and resident diversity. Of all the regulations applicable to residential high-rises, occupancy limits and the extent to which they are enforced were found to have the greatest influence on the socio-economic profile of residents in a block. As the direct dictator of indoor density and indirect dictator of 'real feel' residential density, rethinking how occupancy limits can be linked to square meterage, made more nuanced, or varied within a single building, will be key to designing and managing a block that supports diversity.

Sound construction methods and appropriate use of robust, locally sourced building materials and components are a must for new developments. In the past, maintenance carried out by untrained building staff or awarded privately to the cheapest small builder has led to cumulative failures resulting from years of poor workmanship and corner-cutting.

Specifying the correct elevators for the application is crucial, as is making sure they are properly treated by users and undergo regular maintenance.

Data gathered on stairs and their usage suggests that these circulation spaces are currently undervalued in the architecture, and contain much potential in new developments.

Lastly, it is not enough for new high-rises to comply with outdated emergency escape regulations. Designers must innovate to provide interconnected circulation routes that encourage their use outside of emergency situations, and implement measures to build user awareness and bolster systemic resilience.

The soft (human) infrastructure found in these buildings is the focus of the next chapter. In seeking to create more spatially just housing solutions, the way flat-dwellers experience their living environments in relation to one another is arguably as important as the physical envelopes they occupy. But it is the interface between the two—how acquaintances, friendships, support networks and community are encouraged or frustrated by semi-private space at building scale—that offers Architects the most clues in this context.

Chapter 10:

Samosas flying everywhere!

Findings – Building/ Social

Aunty Margie (82) lives alone in a rented 5th floor flat and has no family in Durban. She likes the company when Urishka comes over to watch soapies on her OpenView, and the kids' channel keeps young Amahle busy on afternoons when her mom works late and Margie looks after her. Sidesh, the IT guy downstairs, is teaching Margie to use a smartphone and she'll soon be able to video call her great-grandkids or hail a rideshare to the public pool. Neighbour Cedric, who helps her up the stairs during load shedding, also brings over dinner whenever he cooks—more than fair compensation for feeding his bird when he's away. And when Margie had a stroke one night, it was Cedric who, on receiving no response to his morning knock as he left for work, alerted the neighbours. Together with building staff, they broke down the door, called the ambulance, and made sure she got help.

This fictional vignette based on a collage of actualities illustrates the kind of complex, reciprocal social relations uncovered during this research. Like humans, no two buildings have the same story. Each edifice has been acted upon by transformative forces, as a physical representation of space imbued with the meaning and symbolism of everyday life. Through the process of inhabiting, the meanings ascribed to spaces are constantly rewritten, reinterpreted, and adopt ever-changing identities as collective homes.

Living in an urban high-rise, our image of home melds with that of the building and its resident body. We define ourselves as belonging to something greater; a socio-spatial configuration somewhere between family and neighbourhood. The longer we stay somewhere, the deeper our lives intertwine. The building shelters us from the elements, keeps us warm/cool, dry and safe from predators/marauders, and acts as an arena in which our social interactions play out. We decide how we interact with the others in our block, whether we keep them at arm's length or invite them into our lives, and when something goes wrong at home, our neighbours are the people best placed to help. In a high-density environment, support networks grow naturally and, especially in a highly unequal society, different stocks of social capital are held by different people. It follows that if a building houses too many of the same type of person, be they pensioners, transient professionals, or low-income families, we might expect to find more close friendships, but at the same time, a more closed system with an excess of some types of social capital and a lack of others.

This research has evidenced the tendency of city-dwellers to gravitate towards 'like' others, those of the same SES, religion or life stage. Particularly the latter was noted to be key: couples with similar-aged kids living in the same building, and both pensioners and students (living independently and in residences or retirement homes) were happy to live in a building with others in their age group. If some prefer to live with like others, then where is the harm in allowing individual buildings to settle naturally into housing only a single demographic, or constructing new buildings—luxury apartments, social housing blocks—designed for just that? Let us return to Iris Young (1999) who explains that the wrongs of residential segregation lie not in the propensity to cluster, but rather in that it:

- Violates a principle of equal opportunity, and thus wrongly restricts housing choice
- Produces and reinforces unjust privileges and disadvantages
- Makes it difficult to remedy these wrongs, as it obscures the fact of their privilege from those who have it, and makes political communication among segregated groups difficult

So, while we may find it more comfortable to live with others whose ways are more familiar to us and whose ills we are more willing to tolerate, the path of least resistance diverges from the one that leads to transformation.

According to Hillier (2008: 227), Space Syntax analyses have shown that "spatial segregation tends to leave things as they are, while integration creates morphogenetic conditions in which new things can happen and new social patterns [be] created." For this reason, he says, social advantage tends to pursue greater segregation to maintain the status quo,

whereas disadvantaged households benefit more from the social potentials of integration (ibid). More than a collection of private cells containing strangers piled atop one another, an integrated system, I posit, must support meaningful interactions, fostering trust, empathy and reciprocity between dissimilar others.

Of the relatively scarce, mainly older available studies of social interactions in residential environments, few make observations on building design, only two focus in any way on intercultural interaction, and none include both variables (Gifford 2007). To establish the extent to which social integration is happening on the Beachfront, I first enquired specifically into the social relations present at building scale, then about interviewees' social circles and where most of their friends lived. Building-level data gathered includes residents' feelings about neighbours, their landscape of worry, the nature, intensity and location of social interactions taking place, and the type of personal and community ties to be found here.

The coming pages reveal how it feels to live in one of these blocks, suggesting how new built interventions might encourage social cohesion and make space for us to be "side-by-side in difference" (van Leeuwen 2010).

Experiencing Collective Living

Living in a flat can afford one anonymity and privacy while presenting opportunities for social interactions of all kinds.

One early (1967) study focusing on mental health found that non-working mothers experience much "isolation and loneliness due to the high-rise buildings' verticality and lack of garden/play space" (Evans *et al.* 2003). More late-20th century studies suggested that the sociofugal nature of high-rises might well lead to feelings of loneliness, isolation or other mental strain, particularly for sociable or less mobile individuals living alone (Gifford 2007). The present research showed no evidence to support this hypothesis, instead suggesting that in this context, the risk of feeling alienated or lonely is outweighed by the housing form's positive aspects, most notably the security it provides in a high-crime society. My findings also suggest that high-density multi-family housing is in fact more socio-*petal* than fugal, as it provides more and more varied social opportunities than low-density, single-family alternatives.

> "Living up here I feel safe and private. I've got one door to worry about; I have blinds, but seldom use them as there's nobody living across the way. [ ] I love the weird and wonderful characters down here. I've a tendency to be a bit of a hermit, and living here is the best thing for me because there's always activity and you're part of it without having to actually engage. I never feel isolated like I would if I was living in the suburbs with a big wall around me. Here, I'm *in* it, yet have complete privacy at the same time."
> ~ Shanti, San Remo

One in five interviewees cited the people as their favourite thing about their building. Nine of these mentioned "community", often in relation to family. Other phrases used were "happy building", "friendly atmosphere", "wonderful neighbours", and *ubuntu*. Nine interviewees cited people—the few troublemakers, rude or shady characters, serial complainers or power-hungry owners—as their *least* favourite thing about the building. That there was overlap with those in the first group indicates that disruptors were very much in the minority here.

The Phenomenology of Neighbouring

Living in close quarters with others is not without challenges, and by all accounts, takes some getting used to. At building level, the senses most engaged by one's neighbours were found to be hearing and smell, and often not in a positive way. Thirteen respondents took issue with noises made by other residents, either immediate neighbours or those living in the flat above theirs. People dropping things, dragging furniture or walking loudly on hard floors were the main gripes. As heard, noise travels downwards inside a building, and even some of the most relaxed, seasoned flat-dwellers I met were perplexed at what went on above them to generate unidentifiable noises at strange hours.

> "[T]his lady living above us, she does weird things like opens a jar of screws or nails and just drops it on the floor at like midnight or 1am. And she walks in high heels in the early hours of the morning, and it sounds like she's moving furniture, dragging around a table or a bed…."
> ~ Avesh, Shorelands

Ceramic floor tiles were the worst transmitter of sound, especially as rugs or mats were seldom used. Timber floor finishes like parquet or laminate, although hard, at least provided some sound absorption. Regardless of floor finish, I heard of several (usually older) residents who seemed to enjoy complaining no matter the circumstances. Even **Shanti** in her fully carpeted flat, was not exempt.

"Except for the woman who lives below me, I love everyone in this block. [She] complains about every single thing I do: I close my door and cupboards too loudly, I cough, I walk too heavily. When I moved in, she came up four times to tell me my TV was making her TV not work! My friend down the corridor has a similar kind of lunatic living below her… what can you do?"

While luck might play a role when it comes to one's nearby neighbours, overall there was a tendency to accept that, like in any community, a block of flats is

bound to have its outlying personalities, and shrug them off with a smile.

A few people said the walls between the flats were thin, and they could hear voices or the TV from next door. **Yusuf** believed these old buildings are unsuited to new technologies, describing the first time he played an action movie on his imported sound bar, and his neighbours in Barcelona all ran out to see if they were under siege. He was the only respondent to feel that flat dwelling left him unable to appreciate the things he enjoyed, confirming that while high-density living will never suit everyone, these flats can still accommodate 99% of the population.

> "It is a problem though, how sound carries and echoes. The way the building is designed you can hear everything: the toilet flushing next door, even a coin dropping upstairs and the person *using* the toilet, and I suppose the downstairs person can hear me, too. But no-one complains, that's just how it is."
> ~ Zahra, Courtleigh Heights

Party noises—loud music, talking and laughing, guests coming and going—caused problems in only a few buildings, and were always attributed either to student flatshares or short-term holiday lets. Speech volume was mentioned several times, as it varies between cultures, but most residents appeared to be self-regulating in this regard.

> "We [residents] will chat to one another across the courtyard if it's only say one floor—within reason, not shouting, that's bound to cause a problem. You have to use your head. People who've grown up in a house, I find it's very difficult for them to adapt to flat life."
> ~ Abdullah, Floradoone

Audible children—talking, shouting or crying inside the home or while moving around the building—annoyed a few, but attitudes to children varied, and six people listed these sounds as pleasant. Two respondents liked that they could hear other people in the building going about their daily lives, finding it a comforting reminder they weren't alone in the city.

This innate fondness for living close to others came up often, articulated subtly in myriad ways. One in ten respondents said they liked the sight of neighbours going about their business or the smiles of building staff, suggesting that high-density collective dwelling starts to mimic more closely the clustered way humans have lived for centuries, before the advent of the car, suburb, and nuclear family.

Most mentions of smells related to others cooking. A high 40% of the sample liked the cooking smells emanating from their neighbours' homes, particularly the aroma of curry, while just over a quarter reported weird or nasty cooking smells. A few spoke of fishy smells, most likely the saltfish or stock used in West African cuisine.

"The first time my mom smelled it, she was looking around everywhere, she told us to take out the bin because she thought something had died in there," said **Lwandle**.

A common complaint was various types of smoke wafting out of open windows or doors. Sometimes in blocks that allowed it (most prohibited smoking in common areas), smokers would stand in the open corridor to distance themselves from children or flatmates, or because a landlord forbade it. Done considerately this seldom caused problems, but smoking or talking beneath someone else's open flat window, quickly did.

In North Beach, a young father received a complaint about the marijuana smoke escaping from the passage side of his flat. Apologetic, he tested various combinations of open/closed windows and fanlights to arrive at one that redirected the smoke yet still cross-ventilated the unit. In South Beach, an owner-occupier's wife awoke one night with an asthma attack caused by noxious chemical fumes entering the bathroom window. When he went next door to confront the men, who he suspected were cooking drugs, and said it was making his wife ill, they were very apologetic and assured him it would never happen again. In both cases, issues that might have escalated into conflicts were resolved amicably.

Of the sources of smoke, incense was the most widely accepted. A few were fine with *agarbatti* (Indian stick incense) but not with other types in open burners which emit a denser smoke and are often burned in a flat's entranceway, raising fire concerns.

In tightly controlled blocks, behaviour that infringed on neighbours' senses was reported to management, who would address it further, but in less controlled blocks residents were expected to manage their own neighbourly relations. This worked in all but two blocks, Elwyn Court and Hawaii, where residents were afraid to confront neighbours lest they respond aggressively, so they called upon security or law enforcement instead.

The Landscape of Worry

Before this research was conceived, I had spent much time pondering the relationship between fear and living off the ground in South Africa. Having grown accustomed to density, I have come to find innate comfort in the jumble of countless lives being lived atop one another, not just for the safety but the sense of belonging it engenders. The high-rise typology has characteristics such as height and a single entry/exit point that make it inherently fortifiable, but in my experience, it also offers a ready-made community, a spontaneous collection of humans all associated with the same place.

With this in mind, respondents were asked how much they worried about six things on a scale from 0 (Not at all) to 3 (All the time). Overall worry was low, with an average total score of 4 out of 18. Worry levels could not be linked to building design or unit location, but appeared instead as a function of three things: the immediate surrounds, a participant's personality, and their relationships with neighbours. The only personal variable to correlate with worry was gender. Women, with an average score of 4.9, worried significantly more than men, whose average was 3.1. Two factors found to mitigate fear were mature age and a strong religious faith.

Fifteen respondents explicitly cited safety as the main reason they lived on the Beachfront. For at least 20, it was one of their favourite things about the location, and it was mentioned by many more in passing. As such, crime was found hardly to weigh on the minds of Beachfront dwellers. This is an important finding in a country where around half the population report worry about violence and crime (*statista.com 2021*), and it contradicts past research which suggests that living amongst many strangers increases anxiety around crime (Gifford 2007).

With home invasion rare on the Beachfront, there appeared to be a collective understanding that break-ins were unlikely to occur if residents were cautious and remained vigilant as a body. The passive surveillance resulting from high numbers of (trusted) others living nearby, was in fact offered as a reason residents felt safe at home. Only the respondents from the social housing complex worried a lot about home invasion, and while their security was indeed poor, reports suggest that vulnerability to break-ins in this context is linked more to a lack of trust and social cohesion between residents.

So what about the other worries that might arise from living in a tall, seaside building in an African inner city? While documented in previous studies, a fear of contracting communicable diseases was not mentioned once. Fear of falling from the building was uncommon, recorded by only six individuals: one who was afraid of heights, and five who worried for young children or visitors. As discussed in the previous chapter, being trapped in a fire or natural disaster is a fear often associated with high-rise flats, but again, worry generally was low. Although flat fires were quite common on the Beachfront, fatal incidents were not, and while residents had all experienced extreme weather events, most accepted there was little they could do about this. Findings suggest that these low worry levels are linked to the presence of a critical mass of nearby others who can be relied upon to assist in an emergency.

Another documented cause of worry for high-rise residents is terrorism, which rose to prominence in the global media after the September 11th 2001 suicide attacks on New York's World Trade Centre. While South Africa is generally understood to not be at great risk of such attack, we still hear of incidents taking place elsewhere in Africa and the world. During the fieldwork, there were several incidents in and around Durban for which motives are unclear, and while worry about terrorism was the lowest of all causes investigated, it still crossed the minds of around 20% of the sample. There was no indication that building size, location, design or management affected this type of worry; all that seemed to matter was the occupants. While (especially religious) diversity was cited as the main reason many in North Beach didn't worry, diversity in South Beach, more commonly equated with foreign nationals, was found to *cause* worry.

In buildings housing a variety of races, religions and nationalities, where residents knew one other, trust across cultural lines was greater. Where this was not the case, or when one group was seen to potentially be hiding something, trust fell and worry about terrorism rose.

In this regard, the inhabitants of a building and the bonds between them appeared to exert just as much influence on the experience of dwelling as any of the high-rise's physical qualities.

Feelings about Neighbours

The open-ended invitation to "Describe how you feel about the others who live in your block" attracted everything from one-word answers to lengthy stories. Nearly two thirds of the sample were positive about their neighbours, describing them as "nice", "friendly", "pleasant" and "polite". Around half as many used more neutral terms like "okay" or "fine", or phrases like "I've no enemies" or "no problems with anyone", implying neutral satisfaction. Nearly 40% of respondents said they hardly saw their neighbours, either because it just worked out that way, they kept to themselves, didn't engage in small talk or solicit company, or respected that others preferred to be left alone. This reinforces what literature tells us about the tendency of city-dwellers to limit engagement with others in order to manage high volumes of sensory input (van Leeuwen 2010). But far from isolating themselves or withdrawing, the flat-dwellers interviewed for this study appreciated the fact that they were, for the most part, able to choose who they interacted with, and how often.

A reason offered by around 10% of the sample for knowing few neighbours was the high number of vacant flats, or a high turnover.

> "I'm quite fine with them but haven't met many of them. [ ] It's really quiet, like incredibly so! I'm used to noise, so when you live in a building like this you always hear people playing music or talking too loud, or they're just banging with their heels, but that doesn't happen here. It's definitely related to the high number of holiday flats."
> ~ Magda, Tenbury

This respondent, who grew up on a French housing estate, seems to imply that her building is almost *too* quiet. The word 'quiet' was used by 11 interviewees to describe their neighbours, more often as a collective adjective for the building. There was little consistency, with the word used just as readily to describe a bustling, high-density block as a sleepy, low-density one. The meaning ascribed to the subjective term differed immensely according to the type, volume and frequency of sounds people were accustomed to hearing at home. It quickly became clear that in collective housing, bricks and mortar can only go part way towards moderating differences. The rest must be negotiated by inhabitants themselves.

Block Culture

While it differed significantly from block to block and sometimes even within a building, there was almost always a sense that social interactions—and to an extent, behaviour, too—were subject to an informal code of conduct that existed apart from official rules and regulations. In smaller, more controlled blocks, this was often explicit. It was common for historical residents to refer to the 'culture' of the block, or speak out in support of an admissions process that ensured all new residents were the 'right fit'.

Broadly, keeping to oneself (minding one's own business, not interfering or gossiping) was viewed as a positive trait by almost everyone, whereas behaviour construed as dismissive, rude, inconsiderate or invasive (talking loudly or shouting, not greeting, banging doors, or acting lasciviously) was frowned upon. One in ten respondents said such behaviour regularly occurred in their building, but almost three times as many said that although most of their neighbours were good people, there were always going to be a few exceptions: oddballs, troublemakers, those who flouted the rules, or complained incessantly. As heard, the exception was often only one nearby neighbour in the flat directly above, below, or next door.

Those living below families with young children were worst affected by noise transmission, and households with kids were more likely to be at odds with neighbours, but this did depend on the dominant population and whether the culture of the block was family-friendly or not. Generally, residents from Eurocentric single-family backgrounds seemed less accepting of children's noise, and those with communal upbringings, more so.

> "I absolutely do not mind whatsoever the noise. I live opposite a whole lot of families with kids and you can hear them screaming and howling, but I've become accustomed to it, I suppose because I grew up in a township with extended families. So even if you move to a suburb where you hear children screaming and shouting, it's not an issue at all, as long as they're respectful and go on with their lives. Generally the kids here are very good, they run around up and down stairs but don't deliberately cause trouble."
> ~ Zahra, Courtleigh Heights

Of all buildings surveyed, Courtleigh Heights had the highest proportion of young families, and probably the strongest building-based social network encountered.

Just up the road, Shorelands' block culture meant it catered for a very different population segment. Having spent considerable time there, I'd seen several LGBTQI+ individuals coming and going, and met three mixed-race couples and several Asian and African foreign nationals here. In the evenings, the smell of marijuana smoke was discernible, mixed in with all sorts of different cooking smells. While relaxed in most ways and evidently accepting of different people and lifestyles, the block was very strict when it came to noise. Few children lived there, and most who did had grown up there, so behaved accordingly. This could be seen as a type of natural selection: people gravitating towards a place where similar (and similarly different) others dwell. This organic clustering has much to do with building design, in particular unit size and spread, and is not presented as problematic unless it explicitly excludes one or more groups, which neither of these blocks did.

One particular aspect of block culture was found to be common practice all over the Beachfront: the exchange of food between neighbours. Sometimes this was a gesture of support, for example cooking dinner for an elderly resident or buying bread for a struggling household, and other times to mark religious celebrations or special occasions. Most of the time, however, food was exchanged simply as a gesture of goodwill and a way of participating in a broader social network.

In Courtleigh Heights, **Zuhayl** said: "Exchanging food, especially in the Muslim community, is part of building relationships and maintaining ties."

Rosco downstairs said: "Ramadan is a big one here, fasting month is huge… you've got samosas flying *all over* the place!"

On several occasions, participants tried to feed me while I was interviewing them. At first I refused politely, but slowly became more comfortable with the idea, and by interview no. 99, was tucking into a chocolate cake bought in honour of my visit.

Tolerance

Overall, respondents demonstrated a clear understanding that dwelling in a flat requires an approach to neighbours characterised by respect and tolerance. A similar narrative that surfaced repeatedly in North Beach was particularly popular with older folk who had lived in flats most of their life.

> "We've a record, we don't ever complain about anything. If the grandchildren come upstairs to visit

and run and play it doesn't bother us at all. [ ] I fall fast sleep at 9/9:30pm and don't hear anything. Don't make me go and stay on the farm, I can't, I'd die—I'm born and bred in town. I think if you come to stay here you must understand you're coming to live communally and there's a lot of give and take and flexibility required. If you *don't*, then you're going to have frustration, you might as well be living in the old-age home across the road if you don't want music or you don't want the children to run. For me, the more children the better. I'm happier, it's more balanced."
~ Bilal, Exeter Hall

From nearby Floradoone came the same refrain, where for much of **Abdullah**'s weekday interview, a baby shrieked and giggled around the courtyard in a walking ring. The din echoed through the building, and I imagined trying to work from home or sleep after a night shift with that going on. Even in most family-friendly buildings, this would be unacceptable.

"Doesn't that bother you?" I asked, gesturing to the ajar front door.

Abdullah shook his head. "When you live like this in a communal block, if you can't accept these things, don't live here, you must get out. And no matter where you move, Umhlanga or Ballito or anywhere, you'll have the same problem. You can't complain unnecessarily about little things. We all were kids once. [ ] I think it's even worse living in a house or complex. I mean, what happens when a neighbour's kids kick a ball over the wall and break a window?"

Many would disagree with this view on the freedom of children to play in suburban versus urban residential environments, but this does illustrate how subjective tolerance is. Although all might agree that tolerance is key to living happily in a flat, we may well disagree as to the nature and extent of tolerable behaviour. Once more, the prevailing atmosphere in a block of flats is shown to depend more on relationships between neighbours than it does on built form or written rules, and as such, is subject to constant recalibration.

Change

Fifteen percent of the sample, nearly all of whom had lived on the Beachfront for at least 15 years, mentioned change when describing their building's population, usually with respect to the racial shift that occurred after the GAA was abolished. Most spoke dispassionately about the transformation; it was just something that happened. Some mentioned specific ways in which their dwelling experience had changed due to new inhabitants, for example become more dense or noisy, and a few alluded to a perceived cultural mismatch of some sort. No-one implied that the change itself, the shift to a more equal multiracial society, was bad.

Elizabeth (70), long-serving supervisor of Sandringham in South Beach Central, described how the block was (scandalously) one of the first Beachfront buildings to accept non-Whites.

"It's like one big family, we live happily and quietly here. Some move away, some come back, some think it's wonderful, others that it's awful or they are in jail," she grinned. This last reference was a nod to the sense of confinement felt by those coming from the relative freedom of rural, suburban or township life and moving into a regulated block of flats.

"We've needed too many rules since 1998 to keep the order, it was out of control—lots of visitors, washing hanging everywhere, noise, no curfews, braais in the building. [Now] we have a majority Black African population, some own and some rent. We've had more foreigners move in lately, mostly Ethiopians who've not been welcomed in other places and are scared."

Elizabeth played a big role in connecting potential tenants with absent landlords, and had even been asked to leverage the rules to eject unwanted additions sent to live with relatives in Sandringham.

"I take the brunt," she smiled.

Here, the same physical container is seen to successfully house a different resident demographic, and Elizabeth, I posit, is the main reason Sandringham so deftly negotiated the transition.

One unique account of change touches on the conflicts that can arise when residential space is shared by people with differing lifestyles.

"Historically it was more of a 'lock and go' lifestyle, many would come here to just sleep, shower and go back to work the next day, or were just ultra-conservative and lived by the letter of the law. You never heard of such a thing as nuisance, there were no fines except perhaps at Christmas when the radio was too loud. [ ] Now, your old White neighbour who you never knew lived here suddenly gets upset because this other neighbour's burning incense and praying. [ ] For someone that's lived in a multicultural society in a block of flats, that's normal, so there's no big deal with your neighbour busting a cracker or lighting something in the building at Diwali time. These days they'll call the fire brigade, they'll cancel your insurance!"
~ Yusuf, Barcelona

The narrative of these blocks as relics of a formal, conservative White past, ill-equipped to house multi-culturality, and of an unwillingness to engage with dissimilar others, was not reinforced elsewhere in the research. In fact, interviewees of all types came across as genuinely eager to learn more about new neighbours and their ways.

Transformation had not always been quick or easy, but there was a sense that those who were uncomfortable with residential mixing had already left the area. The political shift affected not only the racial profile of residents but also the age, thanks to an increase in the number of families with children inhabiting these buildings.

> "When we moved here in 2000 it was known to be designated a White Jewish block, we were told even children weren't allowed. When we interviewed, our firstborn was about two and had a plastic scooter and my wife asked 'You see this common area? Can he use a scooter?' And [the directors] said 'No way! The child will not be seen, and no noise or anything'. So they grilled us when we came to purchase, the questions were tough, but we got in. Over time things changed, people came and went, the older folk either went to retirement homes or passed on, some [flats] were left to estates and rented out. [ ] We've built relationships here, we're part of the community and get involved with the social life of the block. The people are lovely, there's lots of the young generation now with kids, there've been six or eight born here recently. When we came in, a few people were antagonising towards us, and we suspect it was more a cultural thing, and us being a young family. [W]e'd rented a flat before, but in a community-based Muslim Indian block in Johannesburg, so it was run in a totally different way. What concerned [the Board] was the noise, the movement, the kids, and more washing—all those things impacted on building running costs. And because there was no 24/7 security at that time it was all discs, so they were concerned who we were letting in. But when access control went down, we'd get people knocking on our window at 2/3am to be let in, because we're the first flat. So in a way, we paid our dues to integrate."
> ~ Riley, Courtleigh Heights

Aside from a few (usually historical) residents who struggled to adjust to the influx of children, most pensioners across the study area enjoyed sharing their living environments with young families.

> "When we moved here in 2004 we were part of a wave of new residents. Many of the historical residents, older White people, had started to sell up and move on. [ ] We have lots of families, there's a younger group, I don't know whether they're owners or tenants but there's quite a few with one or two young kids. But it's mostly older folks here. I myself like having kids around, it infuses life into the building, you hear them shouting, screaming and running around… our own grandkids definitely contribute to that. The other, older residents are also accepting of it. The Muslim kids here, the little ones, socialise a lot with the others, playing soccer in the yard, swimming in the pool… It's very positive, I enjoy it. So we co-exist nicely."
> ~ Peter, Sahara Sands

Harbouring few preconceptions, children are inherently colourblind with respect to race, and unaware of class or other divisions. Their uninhibited interactions can open communication channels between adults who might feel disinclined or ill-equipped to engage across cultural lines. Children, this study suggests, have an important role to play when it comes to social cohesion in multi-cultural residential settings.

Race thinking and diversity

After a quarter of a century of democratic rule, race plays a very small part in these narratives. When it came up, it was used more to describe a certain lifestyle or worldview, and very seldom in a prejudiced way. Older respondents seemed to use racial classifications purely out of habit, while younger ones often launched into stories about their neighbours without even the slightest inference to race, which points to the growth of a shared local identity largely disconnected from ethnicity. This is an important finding as it contradicts the general view of society and identity in South African. It aligns with Erwin's (2015) work in Kenneth Gardens low-income housing estate, where oral histories revealed how, in an atypically diverse local residential environment, racial identities had been largely deconstructed and replaced with new social geographies based on everyday commonalities, and residents under 35 were consistently ambivalent, viewing race as a 'non-issue'.

In my study, religion was mentioned more often than race, but usually to describe a lifestyle or set of behaviours, and seldom in a disapproving or antagonistic way. The exception was when one grouping clearly dominated the block, showed an unwillingness to engage with others who were not like them, or were seen to behave in a self-serving way.

The propensity to cluster with like others was especially prevalent in North Beach's large Muslim community. This group's tendency to be somewhat insular and look after themselves first was remarked upon by all types of people, from older residents who'd struggled to adapt to the power or culture shift in their block, to young, open-minded Muslims who expressed sadness at the exclusionary practices they saw around them.

Having heard much about the dynamic, tight-knit community in Courtleigh Heights, the following account gives a sense of what it feels like to not belong to the majority.

> "I get on with and chat to everybody, however I'd describe it as a very racist building, I think because they want all the same kind of people in here. I know this because I stood there one day and a White lady

came to ask if there was a flat available and the supervisor said no, and the next thing a Muslim man walked in behind her and she said yes. I wouldn't have got in if it wasn't for my son, he knew the owners of this flat and has lived here for seven years so he went to them directly. My interview happened two weeks *after* I moved in. [ ] I'd say the block is now about 90% Muslim. This lady next door is 95, so as soon as her flat becomes available then one of them will buy it."
~ Prudence, Courtleigh Heights

Here, a sense of injustice is not directed at certain individuals or behaviours, but rather at a perceived imbalance in the system that prevents one or more groups from accessing it. Little can be concluded from this outlying account, but it raises questions about the limits of nepotism, the enduring 'Us and Them' worldview, and the scholarly view of community as something that excludes more than it includes when it "becomes preoccupied with its presumed collective personality" (van Leeuwen 2010).

Another situation where respondents felt alienated from neighbours was when foreign Africans outnumbered locals. South Africans of all races were noted to band together under these circumstances, cementing a strong national identity juxtaposed with that of the non-South African 'Other'. Issues were raised around perceived differing living standards, particularly with respect to waste management, and also difficulties communicating. One supervisor told of a farcical interview with a Somalian family which led her to consider making it a requirement that new applicants, if not conversant, bring an interpreter. Her practicality contrasted sharply with the emotional reaction of locals who were frustrated at their inability to talk to neighbours.

This reinforces the need for at least basic communication in any community, to enable social bonds to form and to make equally clear to all what is acceptable in a shared living environment before contraventions lead to rifts.

More than 20% of interviewees mentioned diversity when describing their neighbours. Many reported proudly that their building was racially and culturally diverse, using phrases like "a total mix masala" or "a rainbow of faces". It became apparent that buildings housing a clear majority of one type of person, be it by age, race, religion or "non-nationality", automatically became unwelcoming of, unattractive to, or even hostile towards other groups. Conversely, buildings where explicit effort was made to maintain a healthy mix of residents, promote tolerance, and accommodate difference, were much more welcoming to a wider variety of people, both as places to dwell and to visit.

By far the most mentions of diversity came from the southern half of the study area. The following accounts come from buildings that differ significantly in age, size and design, but are all occupied by a mix of people.

"Here, on religious days and observances, the whole building exchanges food—sweetmeats, plates of eats. It doesn't matter what religion you belong to, at Christmas you'll get a little parcel, Deepavali you'll get a little parcel, and you'll give out. Whether they know you or not, I'd say about 80% of the building does that kind of thing. And we'll put up a sign in the lift saying 'Eid Mubarak' and in December it'll say 'Merry Christmas', and you'll get a plate left at reception for staff or whoever comes or goes, so everyone can partake... [T]his building is one of a kind!"
~ Cali, Willsborough Mansions

"We've got the whole lot, I call us the Beacon Liquorice Allsorts, a complete variety of people from all walks of life, different faiths and countries. I greet everyone, treat them like I'd want to be treated (I don't care if you're blue, Black or White) and expect the same in return. Even the guys we suspect are drug dealers greet me before I greet them, they respect me as a person, a parent, a woman. [ ] I've no problems with anyone in this building from the first to the twelfth floors… they are absolutely my community."
~ Zainab, Ottawa Court

"[T]here is much opportunity for engagement, we co-relate nicely whether we're White or Black… unfortunately we don't have Indians. There's a high level of tolerance, we co-exist nicely. If I know you're coming and you need a key, we can wait for each other, it's like brothers. [O]nce inside, there are no parties, loud music or drunkards… it's orderly, there is mutual respect. Even the owners respect the tenants and vice versa. People know each other here; we look out for each other."
~ James, Sandringham

"People are generally friendly, we always chat. I look forward to coming home, the social politics are very entertaining. There are some real characters in the building, a complete mixed box of races and cultures—and surprisingly, earning brackets, too. Some people are much higher up on the scale than others, but generally it's hard to tell who's who."
~ Philippe, Port O Durban

These four accounts come from households with per capita incomes ranging from R2500 to R30K per month. As microcosms of the broader society, truly diverse buildings were not only more welcoming,

open and accessible, but appeared to weather change better.

In North Beach, an atypical diversity profile was found in Shorelands. Several intergenerational families had lived there for years in various tenure configurations, and like the rest of the neighbourhood, Black residents were in the minority, accounting for around 5-10% of households. I did not meet any owner-occupiers of this race, and on enquiry, was told the turnover of Black tenants was higher than other races, and that there were fewer applicants from this group. Two possible explanations were offered: The high rentals (standard for the area but around 50% more than South Beach) charged for small units with low occupancy limits, and what one interviewee called a "cultural or lifestyle mismatch" whereby Black residents struggled to adhere to, or had a distaste for, the strict rules. The first explanation is plausible, reflecting the income inequality that still maps onto race in the study area. The second was not backed up by this research, which documented residents of all races who were willing and able to adapt to flat living.

This was the only block surveyed where I found households in all income brackets, from under R6K to over R50K per month. Granted, those in the lowest bracket owned their flats, otherwise they could not have afforded rentals of around R5K/month, but nevertheless, more than any other block, Shorelands demonstrated the viability of a diverse, mixed-income, mixed-tenure high-rise in this context.

Long-time resident **Frank** (42), who scored 10/10 for satisfaction, said: "It's home! I like to see grannies chatting or hear the few kids laughing, it makes me feel like I live in a house not a flat. This is real life—diversity, variety, the full spectrum across the ages. Somehow we're a community."

Faylin (42) gave a most succinct description of his neighbours in Mangrove Beach Centre: "It's an interesting mix of people with a working and middle to upper middle-class feel. It's a mixed-income community, and you meet them so regularly and spend so much time with them—we have common complaints, like the lifts and stuff. So I'm positive, I like that about it, and there are lots of separate immigrant communities, there's a nice diversity to it. I'd say it's definitely a community, although the word is missing from normal conversation these days, it's disappeared from contemporary mainstream culture." Here, Faylin expresses an understanding of community as something open-ended and organic, not to mention important to modern urban life. This early exchange reaffirmed my decision to focus equally on the social and spatial components of the residential high-rise.

Interpersonal Relations

The plethora of complex, reciprocal social relations uncovered during this research casts doubts on the relevance of the urban alienation thesis, developed by social theorists such as Georg Simmel and Robert E. Park over a century ago when the metropolis was quite new. Now, the city is the norm. We are evolving fast, constantly inventing ways to hack the inherited built environment through informality, infill, and adaptive reuse, and, as discussed in Chapter 3, notions of private and public (space and ownership) are constantly being rescripted. Particularly when resources are constrained, humans seem for the most part to have realised that we are stronger if we work together. Mobile technology might have allowed us to isolate ourselves, to tune out in a crowd, but it has also given us many more ways to communicate, share ideas and information, and organise collective action. With the shift towards a more human-centred, sustainability-focused worldview, high-density urban environments no longer necessarily exclude those things that past societies held dear: co-operation, collaboration, and communality.

Simone (2005) writes about negotiating contested residential space in downtown Johannesburg, and the care that must be taken to protect oneself in a competitive inner-city environment. "What will this look like over time?" he asks. "What kind of urban citizen is constructed? How will new forms of sociality be created and what time is required?"

Jacobs, too, spoke of this social balancing act, advocating for slow-growing informal relations, the "rituals of neighbours which develop by chatting at a laundromat or taking children to and from school year in and year out" (Sennett 2018: 80). At the same time as connecting people to the physical space of the city, these face-to-face interactions, she suggests, were emancipatory. "Neighbours left each other free in the sense that, although recognizing one another on the street, or chatting about prices in the shops or the latest outrage perpetrated by landlords, they kept their distance, seldom getting to know each other very deeply" (ibid). Jacobs, says Sennett, "privileged what could be called neighbourliness without intimacy."

Entering, exiting, and moving around their building, a flat-dweller makes dozens of split-second decisions around who to interact with, and how. In semi-private areas we assume a carefully crafted persona somewhere between our private and public ones. Sharing a lift, do we stare at the floor, our phone, or the mirror? Do we exchange greetings, or strike up a conversation?

Past research has shown that social ties grow primarily through repeated face-to-face contact between neighbours, and the frequency thereof is a good predictor of strength of 'liking' and also friendship (Kuo *et al.* 1998). Asking participants to quantify their relationships with neighbours in a tiered way was ultimately effective in establishing the strength and extent of social ties in these high-rises.

Acquaintanceship

Participants were asked how many of their neighbours they knew well enough to greet, or if they were not in the habit, how many they would recognise if they saw them elsewhere, say at the shop. This enquiry was directed at two levels: their floor, and the entire building.

Each unit was counted once, regardless of how many people resided there. Holiday lets where strangers came and went were logged as 'unknown', but holiday flats used by their owners were often recorded as 'known', even if they stood mostly empty. Almost two thirds of the sample knew everyone living on their floor, and only four people knew 20% or less. The average participant knew 85% of those living on their floor enough to recognise and/or exchange greetings.

Horizontal proximity was found to have the biggest impact: almost everyone knew their immediate neighbours on at least one side, but were less likely to know those at the far end of the passage. This echoes the finding by Kuo *et al.* (1998) that high-rise residents were more likely to interact if they shared common access paths or stairs. The average participant knew around 55% of those living in their building. Twelve people, all but two of whom were involved with management, claimed to know everyone in the block. Ten knew less than 10%, and the rest were spread evenly between these extremes.

Building size and duration of residence were the key moderators. Smaller buildings with high occupancy and low turnover were more conducive to knowing one's neighbours than larger buildings with high turnover and many vacant units. Sociable **Faylin**, for example, knew everyone on his floor and recognised an estimated 40 residents altogether, yet in a huge building like MBC this only equated to around 15% of the population. No correlation was found between floor height and how many acquaintances participants had. What seemed to make the most difference, reinforcing the findings of earlier studies (Gifford 2007), was the amount of circulation space that was shared with others, as most brief social exchanges happen in passing while entering or leaving the building, or in the lobby, lift, or passage. Daily routines moderated social contact, so those who only entered and left a building at the same time every day encountered fewer (and the same) neighbours, whereas those who did so more often and irregularly encountered more (and different) people.

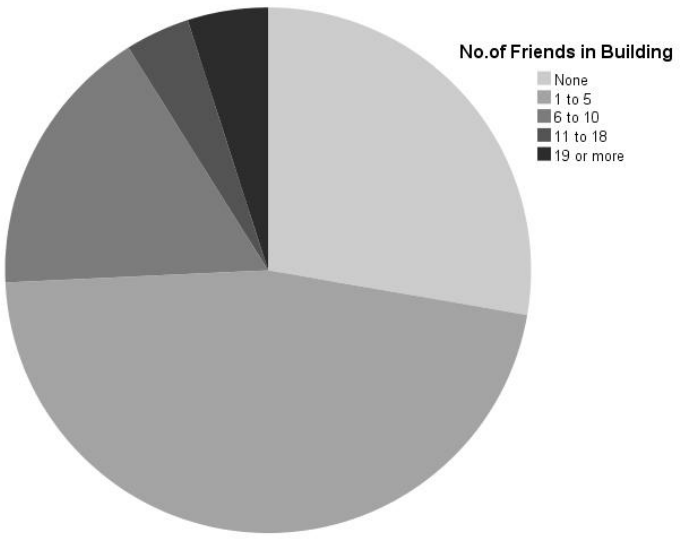
Spatially, in complexes where one building had a separate entrance, it operated almost autonomously with respect to social ties. When a large building had distinctly separate wings with different vertical circulation cores, interviewees seldom knew those in the other wing. This is illustrated by **John** (56) who, although he was sociable and had lived in Grosvenor Court for three years, only knew two people in the large block. He kept regular work hours, parked in the basement, and took the end-of-corridor service lift straight up to his flat, so he barely saw a soul.

"I don't interact much with other residents. Those I meet seem fine—pleasant, polite, unobtrusive—but I do find these buildings quite impersonal," he said.

Friendship

Early studies found that neighbourly relations grow primarily through repeated visual contacts, short outdoor talks and greetings, and that the frequency of such face-to-face interactions is a strong predictor of the strength of liking between neighbours and the probability that they will become friends (Greenbaum 1982; and Ebbesen, Kjos & Konecni 1976, cited in Kuo *et al*. 1998). Other studies in Toronto and Hong Kong (Michelson 1977; and Forrest, La Grange & Ngai-Ming 2002, cited in Gifford 2007) revealed a tendency for urban high-rise dwellers to choose friends who did not live in their building, preferring instead to socialise with people they knew from school or work. Enquiring into building-based friendships, I was often asked to clarify what I meant by 'friend', to which I responded: "Someone whose company you would seek out intentionally, so invite for a coffee or go for a walk with."

I soon realised how much definitions differed. British-born **Milo** (66) had lived in Grosvenor Court since 1983, knew nearly everyone by sight, and found it weird when people didn't greet in the lifts, but had no friends in the building. He was quick to explain that the man he exercised with daily on the promenade was only his walking companion, and his friends lived mostly in Morningside and Durban North. In contrast, **Jamila** (44), who'd moved to Tugela in 1995 and been on the body corporate for 19 years, had an estimated 60 friends in the block, and her entire social and family network was in North Beach.



Many elderly respondents living independently said their friends had passed on, and they had not sought to make more. A well-travelled professional was just as likely to say they had no time for friends as they were

to have friends all over the globe—but none in Durban. For some, the definition of friendship was linked to their background and seemed to imply certain responsibilities or limitations, for example between residents of different genders or ages.

The average respondent in this study had four people in their building they considered friends.

Over a quarter (28 in number) of those interviewed had no friends in their building. For 12, this was intentional—either they were employed in the building and preferred not to mix work and play, or they were more private, had a distaste for small talk, or did not want people arriving at their door unannounced. For the remainder, not having friends in the block was circumstantial. Several young parents said they no longer had time for friends as they had made family their priority, and some longer-term residents, that their friends had moved away.

Nearly half of the dataset had between one and five friends in their building. Newer residents who moved in 5-10 years prior to interview had more friends living on their floor, one of which was usually an immediate neighbour, while more established residents were likely to connect with others who'd been in the building for a similar time, so their friends were spread across floors. They were also likely to have made friends with one or more residents involved in running the building. Both examples reinforce what past research has shown: that the greatest predictors that friendships will grow are 1) residential propinquity and, 2) repeated face-to-face exchanges, for example of the kind one has over years of discussing building-related matters (Gifford 2007).

Interactions between block friends were still subject to unspoken rules, a common one of which was never arriving at someone's door without warning—something that did not appear to apply to children. This research suggests that similar-aged children growing up in the same or nearby buildings, especially if they attend the same pre- or primary school, are likely to form strong bonds irrespective of background.

Catherine, who'd grown up in Carillon, said most of her close friends were now studying and travelled in from outer suburbs (Newlands, Umlazi), but she still had friends in the block: "There's Tara, Mpho, Thando… we all grew up here and went to Addington Primary. We'd walk back together, swim together, hang out… it was really nice. We were the noisy ones, the *gogo's* [grannies] used to complain, they'd throw water on us all the time [laughs]. We were rough in those days, there were lots of taxis that would play loud music, we'd choose a taxi by which one was the loudest."

Around 20% of interviewees had 6 to 18 friends in their building. A few in this group had family in the block, and others had already known people when they moved in.

> [Friends: 12] "We have many friends here, a wide mix of ages and races including children and pensioners. As I'm an artist, kids come and hang out here to visit and draw. I feel like the kids in this area kinda need that, because if you look at what surrounds us, there's only bad sh*t happening around here."
> ~ Zaid, Ocean Way

> [Friends: 15] "It's really the best thing, we all live in harmony here and my boys have friends in the block. Lots of us moved here around the same time with kids the same age, so we often went to the beach or out to play in a group together."
> ~ Sam, Althea Court

These respondents clearly valued the companionship of others living in and around their building. Young father Zaid (27) had taken the opportunity to give back to the community by sharing his skills and time with local kids, while single mom Sam (43) rented in a place where she and her sons all had made solid friendships. For some, this type of living creates a new sensibility about sociability, and we start to see the blurring of the line between friendship and support.

Charlotte (25) laughed when asked how many friends she had in the building.

> "None! That word doesn't even exist here, it's just us, it's nice. At Hawaii we had *lots* of friends, too many to count, like family. We knew everyone, it was amazing, you could literally go to anyone and ask for bread. We had lots of problems there and had to talk to someone, so struggle brought us together. The elders would meet and sit together to discuss issues, send reps to talk to management and report back. They became friends because they shared the same problems. Here we have no problems... why would we be friends? There we had to be part of the community for support, and also it wasn't safe."
> ~ Charlotte, Ottawa Court

Here, friendships are cast in a utilitarian light, indistinct from the social ties cultivated to keep us safe, fed and sheltered, which is important to keep in mind when looking at support networks. Only eight respondents had most of their close friends or social circle living in their block of flats, but nearly 40% overall mentioned the Beachfront. This suggests that although intra-building friendships were not hugely popular, NSTs, so inter-building friendships whether pre-existing or formed over time through shared activities, are still a significant part of Beachfront life.

As heard, hosting friends in a flat can present challenges and for most, this was not considered ideal. As these buildings were found to have few, if any, social or gathering spaces, it is assumed that

many of these friendships play out in neighbourhood public spaces—in the streets and parks, on the promenade, lawns or beach, in cafés, shops or places of worship or entertainment. Of the 40% of interviewees with friends in the area, a third had all their close friends nearby, and the remainder had social circles spread around the city. The 12 whose friends all lived in one part of Durban had usually grown up there and moved to town later. The nine 'incubator' suburbs were Chatsworth, Durban North, Glenwood, Isipingo, Newlands, Overport, Sydenham, Umbilo and Umlazi—Apartheid group areas of all four races—reflecting the racial diversity found on the Beachfront today.

Support Networks

Research has confirmed that support networks and the social capital they transmit are beneficial to all populations, but they can provide a crucial safety net for low-income inner-city residents who are typically less mobile and more likely to rely on resource sharing (Kuo *et al.* 1998). Support networks comprise many small, individual actions whereby social capital is transferred: one gives assistance, and another receives it.

Studies into such 'pro-social' behaviour in high-rise buildings have tended to measure instances of one particular type of non-essential helping behaviour in homogeneous populations, like students, pensioners or families in social housing for example posting a lost letter or donating milk cartons (Gifford 2007). In my study, support networks were investigated by asking how many neighbours a resident would be comfortable asking a favour, say to borrow an egg or let someone in. The average person had four**.** A pie chart of these results looks near identical to that on friendships, but shows little correlation in the detail.

A quarter of the sample had nobody in their building who they would ask for a favour, but at least 80% of the time this was not an indication of mistrust or poor social cohesion, but instead an explicit personal choice. The response was often emphatic: "I would never do that"; "It's not in my nature"; "I'd rather go without". Though in the same breath, it was common for interviewees to say: "… but I have no problem with others coming to me." Most put it down to preference, saying they would feel awkward asking. A lady in Yarningdale said it just wasn't the culture in the block.

It was quite common for people to draw comparisons with where they'd lived before. Said **Susan** (64) in Stromboli, who had retired to the city from the suburbs: "I'll go down to SPAR or do without. We never did that in Westville. People do it here, I find it strange, but I don't mind."

Independence was raised several times, particularly by Black South Africans who were fine with the township culture of borrowing but believed it to be inappropriate in town.

> "They won't help these ones, only my old White neighbour used to help but she's moved away. One day my electricity was off and I went to the Ethiopians down the passage and they told me to go elsewhere. So I decided I must look after myself. When you stay in a flat you mustn't rely on others in the building. It was different before. Now the Black people are nice, but [ ] when you go to them and ask for bread you realise hmmm, maybe they don't have. It's not like in the township where you'll always get onions, Knorrox etc. Here in town, it's very hard to go to a neighbour. I have two cousins living in the building and we help each other out, say if she needs bus fare or I need petrol money, but that's only because we are family."
> ~ Zama, Carillon

This calls into question the definition of a favour, which I had not anticipated to include borrowing money. It surfaced that in buildings where most residents fell into lower economic brackets, neighbours often asked one another for essentials or the money to buy them; no distinction was made here between the two types of help. A far cry from the stereotypical housewife who pops next door for a cup of sugar which she'll soon replace, borrowing is a survival mechanism in sub-economic circumstances, and items are seldom expected to be replaced, at least not in the same form. This reinforces the findings of research in US inner city housing projects, confirming that NSTs are a vital safety net in such communities (Kuo *et al.* 1998).

Zama's story alludes to the challenge that arises when there aren't enough people of means living in a building. When residents are similarly financially constrained, neighbours are simply unable to help as they have nothing excess to give. Once again, this suggests that a localised urban community made up of individuals of differing economic status is a healthier system overall, as stocks are easily redistributed and inequality thereby reduced.

Said **Frank**: "Coming from Newlands East, we learnt the value of even a single slice of bread. Nothing ever goes to waste here; any excess food is parcelled and reallocated downstairs."

Another quarter of the sample had one person in their building they would go to for a favour, but many said they would only do so in an emergency. When the supervisor was an owner-occupier, they were often listed as the first or only benefactor, which was the case with **Zainab**, who, although she herself did not have much, assisted neighbours whenever she could.

> "I went to [the supervisor] once when the ATM swallowed my card and asked to borrow R100, and he said: 'I'll give you R1000 if you want!' So he's my go-to guy, my bestie, we've a special connection. If

he wasn't around, I'm sure I could go to anyone else for help, because people come here to borrow all sorts of crazy things: tomatoes, eggs, electricity (they come with an extension cord)… even water! They also come to borrow money. If I have, I do give, but I'd rather not, because when I ask for it back and they don't have it I feel guilty. But if you need bread, I'll buy it for you."
~ Zainab, Ottawa Court

It was alarming to realise that in some of these high-rises, hunger is still a reality, yet assuring to observe the willingness with which the respondents in this study—rich, poor and of all races and religions—helped those less fortunate than themselves. This sensibility, I believe, grows out of the strong tradition of charity in Indian and British cultures and the philosophy of *ubuntu* or common humanity in African cultures, and is bolstered by religious teachings as well as an innate local understanding of inequality that transcends SES.

A third of those interviewed had between two and five people in their building who they would ask for a favour, leaving 20% of the total sample with six or more potential benefactors. Residential propinquity correlated more with this type of interaction than the others studied. At least 18 individuals specifically said their first port of call for favours was one or both next-door neighbours, irrespective of whether they had a large social circle in the block or not. This is a function mainly of convenience, but might also derive from geographical intimacy: the strange involuntary connection we often feel to those with whom we share walls.

Old and Young

Pro-social behaviour in these buildings was not restricted to giving and receiving goods and money, but extended to assistance for more vulnerable block residents, especially the elderly and infirm living alone. The question on favours spawned discussions around cultural differences in this regard, and other kinds of support—physical and emotional—found here.

Sickly **Zolile** (54) had formed a strong social network since moving in, was friends with everyone on his floor, and had at least ten neighbours he would ask for a favour.

"When I came to live here, I found that people were living a more individual existence. [ ] In our township life, it's communal, if I don't have salt I go to my neighbour and ask for some. But where I was before in the suburb, my neighbour was Mr van der Merwe. Now [he] does not have values like mine, he doesn't borrow salt, he buys it from Pick n Pay, see? So it's different. At first I thought 'What type of people are these?' Fortunately, because of my bubbly nature I get to know everyone, like [Malusi] in the corner who teaches hospitality at DUT and brings us all the leftover food. The people, all of them, are very concerned about my health. If they don't see me, they ask after me, and when I'm in hospital they come and visit."
~ Zolile, Sandringham

Zolile was young compared to many interviewees. While the average age of Beachfront residents looks to have dropped steadily over the past 20 years, there are still droves of pensioners with little or no family contact living in Beachfront flats. Here the phenomenon is largely peculiar to White people, amplified by high numbers of younger families who've left Durban or the country in recent years. This contrasts with the cultural norms of Indian and Black African families, who traditionally care for elders themselves, and some non-White interviewees were dismayed at the idea of leaving seniors to look after themselves or putting them in a care home. In at least three buildings in South Beach, supervisors instructed security guards to check on "the oldies" if they hadn't been seen for a day or two. In North Beach, a few reported helping seniors in their block, but initiative was always taken by residents themselves rather than the management.

One story articulated well how high-density living can support senior citizens living independently.

"White culture encourages one to leave the family home as soon as possible. In a way that's good because it teaches you independence, but the disadvantage is you're not that sociable and have no support network. [T]he very old White lady next door, I don't know how long she lived here, I only saw her a few times and by then I think she had Alzheimer's. She was from Germany, never had kids, and her husband died long ago. [W]e come from a culture where when you move in, everybody comes to welcome and greet you… so she didn't have that support system by which she would've enjoyed her last few years. Except for a nurse, she had no visitors, I think it's sad. [ ] Then, there's another White old lady living upstairs. She's healthy, every morning she goes out, feeds the birds, walks to the park, on Sundays she goes to church. She's sociable, and you can see that adds value to her life. She's always chatting to different people, laughing and smiling, she's got stories to tell, gets involved with the gardening. You can see the dynamics, how that impacts positively on her and how long she'll live compared to someone who's always in the flat being looked after, hardly goes out, or talks to people."
~ Zahra, Courtleigh Heights

Research carried out in locations with high numbers of centenarians, dubbed 'Blue Zones', confirms that a major predictor of human longevity is the extent to which one feels valued as a member of a community, faith-based or otherwise, and receives

love and support from those around them (Robson 2020). No interviewee complained of loneliness, although for some, there seemed to be a stigma attached to the word.

In her 51 years in Northlyn, **Vanjie** (76) had struggled to adapt to the transformation, and after a series of unpleasant experiences had thrown herself into community policing and charity work and cut all ties with her neighbours. But a cancer diagnosis and run through chemotherapy had made her feel weak and alone. "I couldn't walk properly, bathe myself or ride my bike. This is when I needed someone. [ ] I'm not lonely, I'm alone—I'm too busy to be lonely. But I need my life's companion," she confided.

Near Addington, another fit, active senior had no social network in his quiet block, but his son lived nearby.

> "Being alone is not a problem for me, I have my library, my TV and my tablet/phone. Reading keeps me company and I follow the news so there's plenty to keep me busy. But one thing worries me when I come home: in a medical emergency, how would Philippe know? At my age something could go wrong, for example with my heart. Sometimes we only speak every two to four days… how long would it take to find me? As I said, neighbours here are few. At least the flat's location in relation to the hospital is good!"
> ~ Pierre, Tenbury

These stories show the value of participation in society, as well as accessible media and technology, to pensioners living alone. The QoL of both respondents would, I believe, improve significantly if they had even small building-based social networks.

In North Beach, extended Indian families had assembled all manner of social networks across one or more high-rise buildings, and it was rare to find elderly singles of this race living alone. As such, inter-generational contact was particularly high for this group, and it was common for retirees to care for their grandchildren while parents worked, a practice that delivered value in both directions.

Otherwise, most children living on the Beachfront were observed to have little freedom of movement. The exception to this was the southernmost part of the study area, which borders Addington Primary. Building supervisors here reported high numbers of 'latchkey kids', children of working parents who would walk or take transport to and from school, let themselves into the flat and take care of their own needs. A scarcity of nearby play areas meant that uniformed kids were often seen cavorting on pavements or climbing street trees, and some afternoons, the tiny park in Crieff Place was so packed it was hard to see the play equipment. The only participant to afford her children this level of freedom lived in ex-council Elwyn Court.

Arriving to interview **Natasha**, I'd seen her exchange a few words with kids playing in the passage. "They were just letting me know where my son is, he's on the Beachfront with Uncle [Manny] selling pineapples," she said. "Now it's school holidays, my kids disappear, they say 'Mom, I'm just popping out for five minutes' and the next thing you know it's 2:30pm! My son is seven, so he's independent, goes off on his own and only comes up when he's hungry."

This is an example of a building-based information network or 'grapevine'. News travels fast in a high-density environment, and a grapevine works well to protect vulnerable residents. Two examples are a young boy who tried to run away from home, and an elderly lady with dementia who wandered off, both of whom were gently escorted home by neighbours who ran into them and sensed something was not right.

I heard several stories of building residents joining forces to support others in times of need. "[T]he beautiful thing about this building," said **Rosco** in Courtleigh Heights, "is that if there's a death, the whole block rallies around the family to assist. I've seen it on many occasions where everyone gets involved, gets up to help."

In Carillon, **Lwandle** told of a pregnant lady who had gone into labour in the early hours of the morning, and all the retired nurses in the block had come together to deliver the baby. In the same building, young mum **Catherine** said: "It's amazing how different races can be so kind to you, helping in the lift with the baby or when I'm down at the washing lines."

A handful of interviewees disapproved of their neighbours' parenting, believing the children were undisciplined, neglected, or unfairly exposed to bad behaviour (drinking, drugs, or violence). **Rajni** in Rydal Mount was one: "[T]he children are running around in the lifts, up and down the fire escape, and this place, those stairs are *so* dangerous." She told how a toddler had fallen from an 8th floor window and died while her mom was napping. "They're not looked after properly and the mothers turn a deaf ear, you can scream to them but they can't be bothered. It's a noise issue but also a safety issue."

Nobody said they kept quiet when it came to child welfare, the exception to the 'mind your own business' rule, which suggests that vulnerable children in apartment blocks in this context may in fact benefit from the added protection of proximate 'watchdog' others. A similar attitude applied to domestic violence and sexual harassment, as the following two vignettes illustrate.

> "People do argue, there are a few marital disputes, but domestic violence is not so common. We had a couple here sometime last year, but we told the guy off nicely: 'Listen, this is not Nigeria where you can walk in the street and *wind* [beat] your wife and nothing will get done about it. This is South Africa;

here you'll get charged and sent to prison for life.' So that was the last, it calmed down after that."
~ Natasha, Elwyn Court

"[My daughter] is young, very tall and beautiful and likes to wear fashionable clothes. In Umhlanga that would be totally acceptable, but here in North Beach you look like a hooker. She's been solicited so many times—stopped by Pakistani's walking past, solicited out the back even though she's carrying her gym bag or whatever, or cars have stopped. She copes well with it, but I suspect it bothers her more than she lets on."
~ Laila, Marine Sands

In the latter case the victim's mother, after repeatedly trying to lay a complaint with police, one day witnessed two men from her block harassing her daughter. She called up a friend from another station, and had the situation dealt with vigilante-style. These examples indicate a level of autogestion whereby those who could pose a threat to the collective or its members are reprimanded or ejected from the system—not unlike the counter-dominance strategies found in modern and recent hunter-gatherer societies (Wilkinson and Pickett 2009: 208). In fact, much of the data gathered on the social interactions taking place in these buildings, even the sharing of food and the reciprocal exchange of gifts, echoes the way of life of pre-agricultural societies, which were fundamentally more egalitarian. In terms of time and space, the two situations could not be further apart, but the way humans behave towards one another appears to have hardly changed at all.

Might it be possible to capture the essence of these age-old interrelations and shape residential space around them, rather than the other way around? This is something to keep in mind while reviewing the spaces in which social contact currently occurs.

Common Areas

Right of admission to a block of flats is reserved for those with a reason to be there, and once inside, behaviour is subject to a code of conduct. Shared or semi-private space glues the dwelling experience together, joining the space of the home (over which we have total control) with city space (over which we have no control). This in-between space, belonging at once to everyone and no-one, is by its nature contested, open to interpretation and negotiation.

In this study, respondents were asked to describe the communal or shared facilities in their block. Nearly 40% said their building had no such facilities. Eleven mentions were made of spaces that existed but were not allowed to be used, for example roof terraces that were out of bounds to protect waterproofing, or gardens that were strictly ornamental. Some spaces had been activated in the past, but were closed following security breaches or misuse—for example a herb garden or exercise class on the roof. Raised ground planes, usually the top of a parking podium in '60s and '70s buildings, worked well when used as common areas for washing lines or divided into small private gardens for flats opening out at that level. When inaccessible to residents, they were typically viewed as a missed opportunity, and required regular cleaning as people would throw or drop items out of windows—tissues, toys, or old food for the birds.

Half the sample lived in buildings that provided washing lines for resident use. One in four did not use them, preferring to dry clothes on a balcony or rack, over a bath or in a tumble dryer, and a few used them only for bulky items like bedsheets and towels. Washing lines were usually on the roof, either set back from the parapet wall or screened off with breezeblocks, but occasionally were located lower down. In North Beach, especially in blocks with many large families, I was often told the lines were the domain of "the maids", and based on observation, these areas also served a social function for domestic workers. In such blocks, line space was subject to fierce competition. Anyone arriving after about 8:30am was likely to lose out, and conflict could escalate quickly. Some blocks had addressed this by assigning allotted drying times, with varying success. Three buildings in South Beach had on-site laundry rooms for resident use, but only in Tenbury, with its many holiday flats and 24H reception, was the coin-operated basement laundromat used by all, as units had no room for a washing machine. Clothes were air-dried inside flats.



Fig. 158: Washing lines on the roof of Port O Durban.

Other spaces described by residents as shared facilities (mentions in brackets) were a boardroom (4) although this was always reserved for management or

had to be paid for, a satellite dish (3), on-site mosque (2), rubbish chute (2), the restaurant, bar or shops downstairs (2), and a car-washing bay (1).

Circulation areas were listed as shared spaces by 11 interviewees in this study, indicating that they were considered more than just spaces to pass through, but places in which to stop and linger. Design made a difference, here. By obscuring the visibility of other residents circulating around the building laterally (on the same floor) or vertically (between floors), enclosed passages made it far less likely for residents to know their neighbours by sight. Long, narrow, enclosed passages not only trapped smells and smoke which proved bad for neighbour relations, but they also disallowed personalisation at unit entrances and discouraged informal social space from developing.

Very few respondents were comfortable with neighbours, regardless of friend status, coming into their home: "We don't visit in each other's flats. On special occasions we'll pop in, exchange greetings, food etc. and go on our way,"' said **Gilbert**, who nevertheless had a large social network in Belmont. People preferred to socialise in common areas, and so spaces designed for movement served as the primary social arena in these high-rises.

In Sahara Sands, the many elderly residents benefited greatly from the building's unique entrance design. Set back from the corner of the crescent to create a welcoming tiled plaza, the entrance has an oversailing canopy under which moveable seating is provided. On any given day, especially in Summer and during load shedding, residents could be seen sitting and chatting outside by the lobby entrance. With no boundary wall, the corner acted as a shortcut, an extension of the public realm.



Fig. 159: This building's entrance serves as a social hub.

The only other building with any sort of seating outside the lobby was Carillon. Instead of finishing against the pavement, the glass wall of the lobby inclines towards the entrance doors and in the leftover space, a long, raised wedge forms a built-in seat that is protected by the cantilever overhead. Conveniently situated *en route* between TAFTA and the only local supermarket, it was used frequently by non-resident pensioners as a place to rest, sit and socialise. Residents of and visitors to Carillon were also spotted waiting here. The building's governing body had reportedly taken issue with this use of the space and tried to put a stop to it, but the practice continued regardless, creating a lively street edge.

Few other buildings had welcoming, step-free entrances that integrated to any extent with the urban fabric. In some places where designers had clearly considered sociability and designed in walls or planters that doubled as seating, residents were discouraged or prohibited from gathering there as it was thought to cause a nuisance for inhabitants of ground-floor flats.


Fig. 160: The informal 'rest area' outside Carillon's lobby.

Most social contact was found to occur inside the building. "The foyer and passages is where we congregate to chat," explained **JR** in Grandborough Court. "They wanted to turn the Body Corporate flat into a common room, but that didn't happen as they make more money renting it out."

In Hawaii, **Thandeka** said: "We take our stools and sit outside in the passages, particularly at night when it's hot. Kids like to sit out on the stairs and walls."

Similar behaviour, while not allowed, reportedly occurred in Bencorrum Towers, where teenagers liked to gather in open stairwells and passages, smoking, playing music and socialising. The many students living in Wavecrest would almost certainly have done the same, given a chance. "Everyone is just locked up in their rooms, there's nowhere we can sit outside as a group," said **Wasiphakonke**. She pointed longingly down at the top of ex-holiday flats 10 South, a Tropical

Modern gem renovated into serviced private rental units and offering the type of high-end amenities normally found in hotels: "Wouldn't that be amazing!" she said.

Finally, in the old wing of Beach Hurst, a grandly-proportioned 4-storey colonial building with wide (2m+) passages around a courtyard, **Jibreel** shared how, in the absence of communal facilities, circulation spaces had been co-opted for other uses.

"On weekends, people braai everywhere on the inside corridors. I braai right outside [my flat] here! I'm not so sure it meets fire regulations but we do it anyway; I mean, we all understand that, we only use small charcoal braais. One thing we all agree on as residents is that you clean up after yourself: you have your braai, put your stuff away and enjoy your food inside. [ ] One lady on the second floor, an ex-pat from India, she has four children. One son is in matric and the other in Grade 8 at GCHS, and their friends come here in the afternoons to do homework in the stairwell." The sea-facing entrance to Beach Hurst was locked years earlier, and the block is entered through the lobby of the new wing. Attracted to the cool, quiet and space, the youngsters had made the old staircase their own.

"I don't object at all, I love it, because that is *real* use of space," Jibreel smiled. "Those stairs are very comfortable to sit on; my brother and I used to sit there when he lived with me. Foot traffic is low and there's a lift, but if someone needs to get past, they just shift over, no-one minds."

Here we see how flat-dwellers, given some freedom, activate shared spaces in informal, self-regulating ways, with common sense and courtesy triumphing over rules.



Fig. 161: The vast landscaped terrace atop 10 South's parking podium has a pool, braai spot and games areas.

Spaces for Leisure and Play

Dedicated outdoor social spaces specifically designed or set aside for residents to relax and/or socialise with one another and visitors, are rare in the study area. Only five blocks of flats, a mere10% of the sample, had spaces fitting this description. We will look briefly at each to see what can be learned.

The tiny (+- 50m^2) landscaped garden entered from the foyer of Port O Durban was reportedly used only occasionally for small gatherings (braais, photo shoots), and by one lady who'd tried to grow potted vegetables without success. The garden is raised, walled, well-kept, and feels private despite its location on a busy South Beach corner, but its size and weak visual and physical connection to the units make it unsuitable for play.



Fig. 162: Port O Durban's postmodern 'pocket park'.

Its antithesis is the large (+-600m^2) garden belonging to Barcelona, at the northern edge of the study area. Occupying the leftover portion of the property, the grassy lawn has perimeter planting, a slide, a thatched gazebo and a few picnic tables. Eye-level concrete palisade fencing allows visual continuity with the surrounds, but the access gate leads off the entrance driveway, so one must exit the building to reach the garden. Well-manicured and with a kickabout area, it is rather isolated from the rest of the building. Few flat windows overlook the space, yet it feels very exposed to the hot north sun, busy road, and fence-hoppers.

Elwyn Court behind Addington Hospital has by far the largest piece of open ground of all buildings surveyed, upwards of 1900m^2. A grassed bank sloping towards the road levels off to form a playground near the top, with some mature trees along the southern boundary and a few shrubs dotted around the perimeter. At time of research, the play equipment was defunct, but the space still attracted kids and was

well used outside of school hours. That it was not reliably secured means it could well have been quite dangerous—a haven for vagrants, petty criminals or illicit activities—but its position and openness act in its favour. The whole area is visible from Elwyn Court's open access corridors, increasing passive surveillance. Ten floors, each with 14 flats, means over 400 sets of eyes could potentially be looking down. This spatial arrangement lets parents monitor playing kids to an extent, and a direct line of sight and sound means youngsters can be called up to the flat or raise a verbal alarm should something go wrong. By virtue of accessibility, the lawn acted much like a public space. At least 500m from the nearest play parks in either direction, it provided a relatively protected green space for use by other neighbourhood kids, integrating Elwyn Court spatially, functionally and socially with its surrounds.

Only two buildings surveyed had a full set of outdoor recreational amenities that included a swimming pool, vegetated gardens, and space to gather and braai. Interestingly, these are the same two buildings with entrances that activated the street edge and encouraged social encounters, showing a different design approach from their two Architects, one that acknowledges social as well as physical needs.

At the study area's southern tip, Carillon boasts a communal garden of around 600m^2 running two thirds of its length on the south side. Textured tropical modern landscape features reminiscent of Brazilian designer Burle-Marx, include an irregular-shaped pool with angles echoing the architecture, crazy paving, breezeblock walls and a sculptural mosaicked braai stand.



Fig. 163: Plan of Carillon's well-provisioned outdoor area.

The garden's mature trees, benches and flowering shrubs make it welcoming of a variety of people and uses. It is secluded enough to sit and read, but open enough that playing children can be monitored from most flat windows above. The space's only downfall, seen as an advantage by some, is that it is almost always in shade. Surrounded by tall buildings, it receives full sun for at most a few hours around midday in Summer.

The adults in Carillon said they rarely used the garden; they were too busy, or didn't like swimming or the sun. Those who'd grown up there had used the pool every day as children, and one resident often took her granddaughter to swim.

A semi-permeable wall screens the garden from passers-by and creates a protected enclosure with a single access point inside the building's secure zone. This is great for residents and for parents' peace of mind, but it highlights a spatial injustice at play here: this is the only swimming pool in this part of the study area—not even Addington Primary has one. One could argue that the ocean, a free resource, is right there, but in reality, the adult supervision required is simply absent in these circumstances. Children living in more affluent areas like North Beach will likely attend schools that have swimming pools, or have carers to take them to the public pool or to splash in the waves, but there are countless children in South Beach who may never get the opportunity to learn to swim.

Sahara Sands, accessed from Nathaniel Isaacs Crescent in North Beach, is the only other block of flats surveyed that has a swimming pool. The open recreation areas, utilitarian in design, occupy the space between the site boundary and the footprint of the 23-storey building. The parking basement roof is level with the entrance and forms an artificial ground plane across the rest of the sloping site.



Fig. 164: Plan of Sahara Sands' outdoor recreation area

On the north side, the waterproofed slab forms a hard kickabout area, and around the perimeter we find herbs, vegetables, and banana trees planted by

residents, tended to by staff, and free for anyone (who asks nicely) to pick. A low concrete wall means passers-by can peer into the property, so it feels exposed to busy Somtseu Rd corner. While the open space gets fleeting shade from the surrounding tall buildings, it is at the mercy of both north and west sun.

A solid wall emblazoned with the building's name surrounds the pool and braai area which, accessed through the lift lobby, is mostly paved, with a patch of grass for portable braai stands. Sahara Sands' recreational areas are visible from the windows of every unit, which provides passive surveillance and keeps the space safe. Like in Carillon, the amenities were used almost solely by children and those accompanying them.

Asked what one thing they would change about their living situation if they could, nearly 20% of interviewees said they would like one or more open-air communal areas for social and recreational use in their building—by far the most popular building-level desire. Most sought-after were spaces to grow and enjoy plants and for children to play outdoors, and the location most often proposed was the rooftop.

Faylin in MBC said: "I'd like there to be a social area, a communal roof garden that we could all use for socialising, music, maybe yoga, somewhere for the children to learn, and also for growing food." He elaborated:

> "In Durban generally we're still socially inhibited. It's the legacy of apartheid; people don't know how to relate to one another, we're damaged and pass that on to our children. [ ] It would be great if we had more shared communal space and more dignified shared facilities and infrastructure like public transport, mixed-income housing etc. We do have it a bit, but there's always room to improve, you still see divisions even in this one strip of North Beach. There's potential for it to spread, but these things are emergent, they grow organically when the idea is accessible and people are exposed to it in their formative years."
> ~ Faylin, MBC

Nearby in Montezuma, **Aamira** had a similar vision: "Make the apartment block more green! The 14th floor roof is under-utilised and I'd really like to have a communal garden up there. We need more plants; even the ones in pots downstairs, I'm the only one who cares for them."

Neighbour **Gary** agreed: "We need more green spaces, public *and* in the building—vertical and roof gardens, community allotment and food gardens—to benefit the vagrants, the rich, everybody! It'd combine aesthetics with function."

In the dense city blocks straddling Pixley Ka Seme Street, respondents wished for much the same things. **Mpumi** in Rydal Mount grew excited at the prospect of change: "Each and every flat would have an open balcony. I'd make a big open space where we could all socialise, a garden where people could grow vegetables and flowers, and there must be a place to have a braai. When you feel sad you could go out there, just sit amongst the roses and read in the sun… wow that would be a good life!"

Vukani in Ottawa Court had thought about this before. "I would extend the building and add new facilities—a gym, some small stores/spazas in the building where you could buy airtime, bread—and some open space where you could party or make a braai… social spaces! It would have to be on the roof, there's no room down here, and for residents only. That would be enough."

At the study area's southern tip, those living in buildings with no social spaces were equally eager to share their visions.

In Ocean Way, **Zaid**'s partner jumped to answer the question. "I want a roof garden, and it must be pet-friendly. And *he* really needs a smoking spot," she said, gesturing.

"Can't you smoke in the building?" I asked.

"Yes, but I mean cannabis," she replied.

Like many Durbanites, Zaid was a recreational marijuana user. She went on: "In most buildings in town it's frowned upon, but they fail to realise it's less confrontational than having neighbours who are drunk and loud… very much so. They should have a place where smoking is allowed, it's acceptable but with rules. [ ] Where my mum lives in Morningside, the lady who runs the block has designated a fenced off spot at the end of the driveway where people can go to smoke and it doesn't interfere with other tenants. Because it's private property, cops can't come in, so the smokers are amicable and respectful, there are ashtrays and you never ever see *stompies* [butts] lying around."

In this example, building residents and management had arrived at a solution to accommodate differences that could have caused conflict, simply by making the physical space for those differences to play out.

Finally, nearby in Groote Schuur, Architect **Alex** had often pondered ways to improve his living environment. Earlier, he had pointed out the blank parking façades at ground level, and the wide oblique corner pavement—the perfect spot for his juice bar. It would open early, have tables and umbrellas spilling out, and cater for the active types that frequented Addington Beach. He later decided his least favourite thing about the building was its lack of communal space, as the common areas on the roof had been privatised, so his answer to the visionary question was: "Making public place, so the juice bar downstairs and the terrace on the roof… I guess that would make me the ham in the public space sandwich!"

All up and down Durban Beachfront, from the most exclusive buildings to the least, people of all ages, races and income brackets, called for more and better shared spaces; places where one can relax, commune with nature and get to know neighbours better. Many interviewees appeared to instinctively understand the importance of such spaces to QoL, and how crucial it is to our wellbeing to have access not just to open space and nature (fresh air, sunshine, plants), but to each other.

Conclusions

This chapter employs a methodological approach to expand on the work done in Chapter 8, from the personal dwelling experience inside one's (private) home, to the collective one as it pertains to one's neighbours and the (semi-private) areas shared with them. It is hoped that the user perspective captured here conveys to an extent what life in a block of flats feels like in this context, and is intended as an impartial record to assist Architects, developers and decision-makers to better understand some of the more nuanced aspects to be taken into account in the design and construction of high-rise, high-density housing.

In some cases, data is directly translatable into practical design approaches to aid, for example, in reducing vertical and horizontal noise transmission between flats, or inhibiting the lateral travel of smoke. Most important is the need for components that let occupants control unit performance to minimise disruption to others, putting the power in their hands. The enquiry into what flat-dwellers worry about and why, reveals much with respect to tall buildings and disaster response. As heard in the previous chapter, existing fire escape routes and procedures tend to be outdated, non-compliant or dysfunctional, and have little bearing on residents' peace of mind.

This research suggests that in a residential building, collective action to support and protect members of a group, in this case a resident body comprising differently-abled individuals, is in fact the best defence mechanism in any emergency situation.

To get a sense of whether the resident population of a particular block can be somehow classified, and how the atmosphere or culture of a place morphs into a unique collective identity, this research design worked well. Had it focused on only a few blocks or a smaller geographical area, much would have been lost, as there were similarities present across the study area, peculiarities found only in one block, and everything in between. Clustering of like sorts of people was quite pronounced, with the two biggest drivers being life stage and economic status. Pre-existing relationships with Beachfront-dwellers were also a pull factor, with people seeking to live near—but not necessarily in the same building as—friends, family, or those of the same religion. Instead of discouraging such clustering, understanding block communities as a series of micro-publics where dialogue, debate and prosaic negotiations must take place (Amin 2002 cited in van Leeuwen 2010) might give designers clues as to how space can be made for different groups to overlap or co-exist in the same building or different parts thereof.

Findings around tolerance of difference, change and both racial and socio-economic diversity were very positive, and suggest that not only is the time ripe for a new type of building that supports Durban's special brand of hyper-multiculturality, but that in this location, a well-designed container with facilities that support communal living will not only attract and retain occupants but sustain itself well into the future—physically, economically and socially. If in this new container, the average resident knows 40% of their neighbours, has four friends and at least a few people they can go to when in need, it will have done well to replicate the existing conditions found here, already shown to deliver a good QoL. This research suggests that a building designed to be prosocial will quickly surpass these indicators—a critical finding in a divided society such as ours.

As seen, helping behaviour in a block of flats takes many forms, and can be as gentle as holding a lift door open, passing on a message, or providing companionship for a lonely neighbour. An integrated system makes these small acts more possible. As such, the brief for a socially integrated housing environment would do well to include as many items as possible off the wish list of those interviewed for this research.

With a view to addressing broader structural inequalities in society and in our built environment, we should consider ways in which privately-built and -maintained residential recreational facilities could benefit a wider user group, and act as meeting points and arenas for skills sharing between differently-resourced individuals. To have a safe place in which to meet others who are different from us, learn about one another, laugh, commiserate, and partake in joint activities, is a huge privilege in today's South Africa. Making physical space for this to happen in urban residential environments is, I believe, vital to the pursuit of spatial justice.

This chapter concludes building-level investigations and sets the scene for the last spatial scale: that of the neighbourhood. I hope that by now, the reader will have developed enough empathy with the 101 to be able, to an extent, to see the context surrounding these buildings through their eyes. Stepping from a block out into the Beachfront's public realm, spatial injustice and inequality are straightaway apparent—at times glaring. As the coming pages will show, at the scale of the neighbourhood, the contrasts are much starker, the truth inescapable. It is here that inequality and injustice and the ills they manifest are plain to see.

But how might a new building change the environment around it? Must it necessarily counter the negative forces acting upon it, or could it specifically be designed to absorb, convert and eject them? Instead of an inward-looking, self-serving object, how might a residential high-rise act as a force to promote spatial justice, amplify that which is already positive, and contribute to the betterment of the broader society?

It is the task of the final findings chapter to answer these questions.

Chapter 11:

They call him Cakeboy

Findings - Neighbourhood

> "Neighbourhoods, in some annoying, inchoate fashion exist wherever human beings congregate, in permanent family dwellings; and many of the functions of the city tend to be distributed naturally—that is, without any theoretical preoccupation or political direction—into neighbourhoods."
> (Mumford 1954)

Discernible in the archaeological remains of Sumerian cities which date back around 4000 years (Morris 1994: 22), the neighbourhood is not a recent construct but rather, as Lewis Mumford says above, a natural feature of human settlement. A neighbourhood moderates between the scale of the building and that of the city. It constitutes part of a greater whole, and at the same time is a recognised urban unit with its own logic. It can generate communal relations, "induce rewarding human associations", and provide comfort and convenience (Kallus and Law-Yone 2000).

Over time, the theoretical understanding of neighbourhood has changed from a humanistic to an instrumental to a phenomenological one, the first and oldest of which sees a neighbourhood as a universal human phenomenon, a fact of life, and "a place defined by the identity of the people inhabiting it" (ibid). This approach, seen in the work of Jane Jacobs, is based on "some of the most fundamental human properties: the need for association, for social bonds, and for the sense of community" (ibid.) The instrumental view sees a neighbourhood as a complex, flexible, open-ended subsystem that is part of a structured whole, essentially a planning tool that allows for multiple and changing meanings to be ascribed to it. The phenomenological view treats a neighbourhood as a cultural entity arising out of conventional continuity and collective memory, within which lies the knowledge and awareness of a place.

As described in Chapter 1, the Beachfront developed incrementally and, bar the newest part, was not planned. Everywhere but in North Beach, the physical limits of neighbourhoods are difficult to discern. Moreover, the expansive political and socio-economic change of the last 25 years has resulted in very little cultural continuity or embedded meaning. As such, the humanistic view of neighbourhood as a social construct—an intricate, ever-changing network of relationships between those living and working in the area—best describes the situation here, and was adopted for this research.

Spatially, a neighbourhood is defined as a district (a specific geographic area), and functionally as a community (a set of social networks) within a town or city. Neighbourhoods can and will grow organically over time through repeated interactions between people who live near one another, as described by Jacobs (1961). As such, they must evolve with new development, responding to the unique local context.

In Jacobs' view, the streets and sidewalks of safe, successful city neighbourhoods must have three main qualities: 1. A clear demarcation between what is private and public, 2. Buildings that engage with and overlook the street—"Eyes upon the street, belonging to those we might call [its] natural proprietors" (1961: 35), and 3. Pavements that are used near-continuously, to increase safety and encourage those inside buildings to look out. These conditions are found infrequently in the study area, and nowhere do all three occur at once.

A closer look at how Beachfront streets and public spaces are currently used, perceived and managed, and how these factors impact upon residents, may suggest ways for new, mixed-income, mixed-use high-rises to add functionality and catalyse positive neighbourhood change.



Fig. 165: Five zones, each with a different urban character.

The Limits of Neighbourhood

As described in Chapter 5, the study area, known in broad terms as Durban Beachfront, is divided into two areas. North and South Beach reflect administrative districts, police jurisdictions, and the descriptions on property websites. Within each, it is possible to discern at least two areas with distinctly different urban form and character, defined here as Zones 1 to 5 for clarity.

North Beach, defined on three sides by roads and open spaces, is a self-contained geographical area that functions and is understood as a residential neighbourhood with its own community. Although composed of several micro-communities, these are distributed across all buildings in the area, creating a social 'mesh' that reinforces the cohesive identity of the place. South of this is a break in the urban fabric before Old North Beach begins. Here, population density drops sharply as the built form narrows to a single line of buildings, most of which are hotels and holiday apartments. The near-deserted back side, a wide road bordering the linear Victoria Park which is split in two by a Metro Police depot, contrasts sharply with the bustling, fine-grained tourist magnet on the sea-facing side. There are too few long-term residents for this to qualify as a neighbourhood, and a 'holiday resort' image prevails.

South Beach Central likewise has no distinct neighbourhood identity, but for different reasons. Merging seamlessly into Durban's downtown, the dense built fabric, concentration of businesses and entertainment venues, student housing and short-term residential buildings (lodges and hotels) mean long-term residential use takes a backseat. The area's fast pace and high turnover were found to have a socio-fugal effect at neighbourhood level, so while intra-building social networks were strong, inter-building relationships were rare.

Asked about this, **Aphiwe** (25) in Belmont replied, "That's tricky, it's not really a neighbourhood, it's mostly hotels and businesses, so I wouldn't say I have neighbours!" Only he questioned the term, which otherwise was left to interviewees to interpret.

Crossing Rutherford Street into the Addington zone, residential density drops sharply. The hospital itself occupies most of the land here, a collage of buildings from different times in history, some of them vacant, dilapidated, or under renovation. In urban terms, the complex suffers from poor legibility, lacks a cohesive identity, and forms a physical (if not always visual) barrier between the inhabitable city and the ocean.

The urban fabric in this zone is loose, inconsistent and not pedestrian-friendly. The cluster of residential high-rises at its north end is contiguous with the character and density of the CBD, so a neighbourhood feel exists, but dissipates quickly as one moves south. The strip of Prince St behind Addington is dominated by through traffic and hospital-related functions, mostly housed in converted low and mid-rise buildings.

Lastly, in South Beach uShaka, residential use returns to the frontline with a cluster of high-rises, mostly flats with a few timeshares and holiday apartments. Bounded on three sides by the hospital, sea and uShaka theme park, this feels like a small neighbourhood in the traditional sense. With a defunct open-air mall at its heart and very limited commercial offerings, the area is abuzz in the day with Addington

Primary scholars, pensioners, minibus taxis and frontline beach-related activities, but very quiet at night. It has a mainly residential feel.

The dwelling experience changes depending on where one lives inside the study area. Data collected at this spatial level—experiential (likes and dislikes, sensory input, worries) and practical (getting around, use of facilities)—combines to paint a rich picture of the many external factors acting upon these residential high-rises. Understanding the context, we can learn how buildings respond to opportunities and mitigate threats posed by their surroundings.

A Seaside Attraction

Living here, it is impossible to escape the presence of the ocean. Whether or not one goes into it, which a surprising number of respondents never did, the body of water was found to have the greatest impact on all senses, linking to much of the positive and also some negative experiential data. Half of interviewees said proximity to the sea was the thing they liked most about living here. A handful mentioned the sight of it—the views, scenery, outlook, colours and reflections. Others found it calming or therapeutic. "I love just being beside the sea, it has healing power," said **Sollie** in Carlton Towers.

Over a third of the sample mentioned the sound of the ocean, and just under a third its smell, as positive stimuli. A handful described the "cool clean air" or "fresh sea breeze". Only a few referred to the sea as nature, instead using the term for green areas like the indigenous dune forest visible from **Shanti**'s San Remo flat. "The edge… I'm out in nature even though I'm living in the city, it's my horizon in the city."

As well as its beauty and openness, the activities and people the seaside attracts were appreciated by over 15% of the sample. A leisure and tourism resource unparalleled in the country, the warm sea, sandy beaches, expansive promenade and back-of-beach amenities exert a powerful pull on international and local visitors and Durbanites from other parts of the city, who come here to swim, surf, cycle, skate, jog, walk, picnic or relax. The huge public space's use is subject to daily, weekly, monthly and annual cycles according to seasons, tides, school calendars, and even pay cycles.

The place changes continuously, and is never entirely deserted. "I love the variety, every day is different," said **Milo** in Grosvenor Court.

"There's plenty to do… life comes to us," smiled **Jill** in Wendover.

Several participants appreciated that friends came to visit them because of their location. New father **Adam** had grown up in Durban, moved away, and then come back. He explained that it was always his dream to live here. "It's a friend magnet! So although parenthood has reduced our social lives, many of our friends still visit as they can stay with us—they probably wouldn't come to Durbs otherwise."

Adam's decision to rent a 3-bed flat on the South Beach frontline was economic. "We could've got a place in North Beach, but that would've cost twice as much."

Pierre in Tenbury said not only did friends visit him because of his location, but the sight of shoreline activity motivated him to stay fit—a sentiment echoed by others.

"The neighbourhood attracts like-minded, health-conscious people… the activity is infectious," said **Rob** in Groote Schuur.

Zaid in Ocean Way spoke of "a different mindset down here, the surf and beach culture… it's healthy for the youth."



Fig. 166: Looking North from Addington Beach bathing area

The beach and related activities resulted in what participants called a "holiday-y" vibe.

"The best thing is feeling like I'm constantly on holiday… happiness breeds happiness!" said **Yasmin** in Yarningdale.

The presence of tourists and business and sports travellers staying in Beachfront hotels was appreciated by quite a few. "I like the hotels for my visitors, and meeting tourists is a good thing. Talking about their experiences in other places, it enriches me," said **Zolile**.

This group showed an understanding of the importance of tourism to Durban and the area's economy, and often a strong sense of pride in what "our Beachfront" has to offer.

This shared sentiment for the sea makes those living alongside it feel connected to one another, and in some cases, inspires a sense of responsibility for the resource, too. Several people expressed frustration at the extent to which tourists were harassed and mugged in the area. Here we see protective attitudes arise when an economic and cultural asset to the

neighbourhood (the tourist) is faced with a perceived threat (the aggressive vagrant) that could jeopardise systemic equilibrium.

Nobody interviewed had a problem with tourists, but the other, far more numerous groups of national and provincial holidaymakers who descend upon the Beachfront over major holidays were not viewed so favourably. At these times, charter buses and minibus taxis arrive from inland, packed with vacationers and often enough possessions to allow for cooking and sleeping in and around the vehicle for multiple days.

Visiting the coast to cleanse, 'earth', give thanks and perform rituals bears great significance in African cultures, but during apartheid such activities were restricted to a few northern beaches designated for Black patrons. Since the beaches were opened to all races, visitor numbers have increased annually, and they disperse naturally all along the Beachfront. For days either side of major holidays, Metro police erect manned barriers two blocks back from the frontline to prevent buses and minibuses from accessing the shoreline, and provision is made on nearby sites for vehicles and the sanitary accommodation of passengers.

For the rest of the year, it is common to see minibuses full of day trippers who base themselves around the vehicle, and private vehicles arriving to set up camp for the day. Open fires are prohibited in all but a few northern locations, and public alcohol consumption forbidden, but for the most part, these behaviours are tolerated unless they cause trouble.

Such informality and the unpredictable ebb and flow of strangers speaks to a very porous and fluid neighbourhood. During the research, more and more residents were seen using public space in these ways at all times of year, as if holidaymakers had given them the confidence to claim their right to the city.

In December, the timeshares, holiday lodges and self-catering apartments in South Beach and downtown are packed, the frontline hotels are full, and so are the second homes, causing a steep spike in the local population. Sporting and cultural events such as triathlons, surfing contests and religious festivals take place all year, but more so around holidays, attracting even more people and cars. This influx, "the crowds", was spoken of often, and many residents avoided the seaside at busy times. Over 10% of the sample cited the holiday "crush" as their worst thing about the neighbourhood.

> "When people come in December in their hordes and then there are events, the holiday chaos, you don't even feel like going to the beach. [W]hen I moved in just after the [1994] elections, my aunt and them had arrived a few months before and everything was fine, there was no influx. Then on December 16th the whole park was full of people, it just suddenly happened—it was the transition. Over the last 19 years I've noticed more people coming here in *all* holidays."
> ~ Aamena, Stromboli

Respondents complained mainly of outside noise from revellers (talking, laughing, shouting, fighting) and a few of public indecency—visitors changing, relieving themselves or being intimate in plain sight.

A lady in Yarningdale bemoaned the 'aftermath' of visitors: the litter, excrement, and trampled plants left behind. Several residents took issue with vehicular traffic at these times, both the congestion and the difficulty finding parking. Those who struggled with the holiday season were on average 60 years old and mostly women living in the north of the study area.

The words used to describe the season ("chaos, disruption, lawlessness") fit into a narrative around Durban Beachfront that has existed for decades, one of a decent, clean public space that, once a year, is overrun with uncivilised masses. Dating to apartheid, this has long been invalidated by the democratisation of beaches and year-on-year improvements in safety and policing, but as seen, still exists in the minds of some, perhaps out of nostalgia for the familiarity and order of the past or in response to feeling outnumbered.

Sprightly **Anne** (73) felt that North Beach was "getting more over-crowded with others, particularly on weekends and holidays". Not said with any animosity, this was nevertheless a reference to the racial profile of holidaymakers. "Durban has changed a lot. When we go walking on Sundays, we barely see a White face... some places like the Suncoast restaurants and South Beach pools have no diversity at all. It's not so much a worry as just not a nice feeling. It's like alienation, a sense we no longer belong here." The sentiment was echoed by a few others of Anne's demographic.

The anomaly in the group was mom **Pamela** (29) in Wavecrest, who took her children to the beach every weekend. "[N]ow it's December time, children go missing and people drown in the water. You see a lot of people struggling in the sea, it's right in plain view, you can't run away from it, you have to watch them being rescued," she said.

Her dislike of holiday season had little to do with the visitors and much to do with her empathetic nature and maternal fears.

Inland-raised **Wasiphakonke** (20) disliked how busy, crowded and noisy the neighbourhood was, but for her, the "Beachfront lifestyle" more than made up for it. "I love the whole experience—the beach, people, tourists and entertainment at uShaka."

This indicates that in some cases, generous public open spaces, nature and high-quality recreational amenities can alleviate much of the strain caused by high-density living.

Peter (74), who used the seaside daily, said his favourite thing about North Beach was "easy access

to all important facilities, mostly the beach, and it costs you nothing to entertain yourself… most importantly, you can have a ball and not spend a cent!"

Peter was the only person to explicitly mention this, but the accessibility of the Beachfront's recreational spaces is crucial to the present inquiry. A visitor with a padded wallet has no shortage of things to spend money on here, while those who arrive with little still have plenty to do. Its accessibility to the full spectrum of society makes Durban Beachfront and its promenade perhaps the most inclusive public space in the country, a place of "universal human engagement where your glee at the sea can't be masked" and where, according to Buccus, "a neurosurgeon has the same enjoyment as a mechanic" (Ardé 2020). The more they engaged with the shoreline and the people and activities it draws, the more profound its effect was on those I interviewed. In the interests of spatial justice, it is therefore vital to recognise and support what works here, take steps to address residual segregation and inequality at building and neighbourhood scale, and create new, accessible residential opportunities.

Convenience

After the sea, convenience—a quality intrinsically tied to higher densities—was what respondents most appreciated about the neighbourhood. In a highly unequal society, convenience tends to be a luxury of the rich, while the less-resourced face prohibitively high transport costs and long, crowded commutes, reinforcing the disparity. The benefits of convenience to QoL are evidenced in this study. Less time spent commuting or procuring essential goods equates to more time spent with family and pursuing leisure, which relieves stress generally and counters any strain that might arise from high-density living.

Convenience was mapped by asking interviewees their destination for eight things: work, study, groceries, specialist goods, worship, healthcare, exercise and entertainment.

By private or public transport, the Beachfront is well connected to all other parts of Durban. Two minibus taxi routes use Pixley ka Seme St (inbound) and Anton Lembede St (outbound), split at Gillespie St and head south to the Point or north to Suncoast. Between about 4:30am and 6pm, vans pass every few minutes, can be hailed anywhere, and cost R7 irrespective of distance travelled. The PeopleMover, a formal air-conditioned bus service with fixed routes and stops, runs reliably about every 15 minutes up and down the Beachfront, from the stadium to the Point. For those who drive, the area is easy to reach via inner-city arterials that now connect into the M4 heading north and south, and the N3 west. Other ways to get around include rideshares and meter taxis, which are quick to hail as they rank outside hotels.

Several people had bicycles for recreation or sports cycling, a few used them for errands, and most said that once in the area, everything they needed was in walking distance.

Convenience was explicitly mentioned by 3/10 interviewees, two thirds of whom were car owners.

Fit new father **Alexandre** (29) ran his business from Grosvenor Court but regularly drove to his outlet on the Bluff and to meetings all over Durban. For him, convenience entailed getting in and out of town easily, travelling from his flat to Campbell Gym, Kings Park pool, the sea and promenade for exercise, to Suncoast for movies and restaurants, and to UNISA in Stalwart Simelane St for weekly lectures.

In Willsborough Mansions, **Cali's** (51) favourite thing was that the area was "central and accessible… the totality of the urban experience". They had three cars, but she only left the Beachfront occasionally to visit the family business in Phoenix (+-18km) and twice weekly to attend church in Durban North. She never used the sea, but everything she needed—the promenade for walks and cafés, Shoprite or SPAR for groceries, Suncoast for entertainment, her GP at North Beach Medical Centre—was easily reachable. Even for specialist goods, Cali shopped in town rather than drive to a mall. Other car-owners liked that they did not *have* to drive, or drove less.

Adam (29) who found the Beachfront "super convenient", left his car at his workplace in town and commuted by unicycle. In Ocean Way, nurse **Roxy** (49) found it stressful and slow to drive in rush hour when she did night shifts at Mahatma Ghandi Hospital in Phoenix, so took transport on those days—the PeopleMover to the Workshop in town, followed by an express minibus taxi. In Carillon, businesswoman **Zama** (46) who worked in sports tourism and travelled a lot, also liked being able to catch transport if she didn't want to drive.

In contrast, aside from the occasional visit to the beach or Surf Riders café, neighbour **Lwandle** (29), who most liked the area's connectedness, drove everywhere. She worked in Umhlanga, shopped at Gateway Mall or Musgrave Centre, went to gym at Moses Mabhida stadium, and met friends for dinner in Florida Rd or Station Drive. The flat where she had grown up now essentially served a dormitory function.

For those who did not drive, the Beachfront was just as convenient. Masseuse and healer **Jill** (48) worked from her North Beach flat, and her clients came mainly from nearby hotels. She did yoga at home, walked on the sand or promenade, or swam in the Elangeni pool for exercise. She studied courses online, entertained herself with books or the internet, and worshipped wherever she happened to be. Groceries came from SPAR or PnP, both around 200m away, so the only time Jill left the area was to get specialist goods at Windermere Centre.

"The neighbourhood is convenient and easily accessible for everything, especially for [my son]," she said. Living in an urban environment meant more opportunities for the 19-year-old, who I'd seen doing odd jobs for the supervisor and helping out at Pirates SLC Café to gain work experience.

Vukani (20) in Ottawa Court did not drive, either. An Engineering student at MUT in Umlazi, his commute was around 34km return, but their location meant he could catch free shuttle buses from MUT's Lonsdale Res across the road. Groceries were bought at Shoprite or Seaboard SPAR, and for special goods he headed to China Mall or into town. He played soccer bi-weekly in Victoria Park, went to church at North Beach's Olive Convention Centre, and the Suncoast games arcade for entertainment. His favourite thing about the neighbourhood was that "it's cool, everything here is nearby. Let's say if you need airtime at 2am, you can go downstairs and there's a shop that's open 24/7".

With respect to convenience, a neighbourhood is primarily a spatial construct, a web of interconnected geographical locations with one's home at the epicentre. Where there is overlap with the social construct, fertile ground appears. An urban area that is too busy and full of strangers works against neighbouring, as does one that is so spread-out that residents seldom encounter one another.

The Urban Condition

The shoreline (horizontal, natural, public) here encounters an equal but opposite force, the high-rise inner city (vertical, man-made, private). The contrast, but also the synergy between the two, is responsible for the Beachfront's unique spirit of place or *genius loci.* While the positives of seaside living were found to far outweigh the negatives, balancing the primary advantage of living in the inner city (convenience) with its disadvantages, the less severe but far more numerous nuisances, proved challenging for some.

The Sounds of the City

Almost everyone who cited the 'buzz' or 'vibe' as something they liked about the neighbourhood was referring to beach-related activity, but a few found the liveliness of the inner-city invigorating.

Charlotte (25) had lived in South Beach for nine years and hardly ever used the beach. Yet she loved that the neighbourhood was: "Vibey! Even if you live in a sh**ty flat, you get to go outside and feel alive."

This suggests that for certain personalities, disappearing into a throng of people in a busy urban setting provides a similar escape from high-density living that most get from nature and wide-open spaces.

Jill and Vukani from earlier both mentioned the "24-hour city": a place that hums with the daily rhythms of human life and never truly sleeps. To walk in the city at night without fear is, I believe, one of the greatest privileges an urbanite can claim, and not one experienced by many South Africans. At least a handful of interviewees appreciated this about living here. With too few watchful eyes, certain areas were best avoided at night—the stretch of promenade in front of Addington Hospital, the roads beside Victoria and Carpendale Parks, and the open blocks north of KE Masinga Rd where the urban fabric is interrupted—but there was sufficient activity along the well-lit frontline that most residents happily walked there after dark.

Laila (66) told of one time she had walked home from Suncoast to Old North Beach at 3am on a weekend without thinking twice and "oblivious to any dangers". Having grown up in urban Dublin, Laila had written her own rules around living in South Africa. "It's beautiful here in the day, and even at night sometimes. I love to watch the (quiet) carry-on, the men who chase the prostitutes etc. It's the weekends and holidays, noisy kombi's and Joe Kool's drunks that are annoying. On the other hand, my daughter invited me to stay the weekend at her place in Montezuma and I said 'No thanks', because North Beach is *too* quiet, I like a bit of life… I like to know I haven't died!"

This introduces a powerful contradiction inherent in the urban condition: the conflict of uses. Twelve people dotted around the study area cited outside noise as something they disliked about living here, and over 200 mentions were made of unpleasant neighbourhood sounds—the most in any category. On analysis, over 80% of these relate to the urban condition, so although city sounds were seldom bad enough to significantly reduce satisfaction, they were noticed by all and did bother many. In this context, tolerance for outside noise hinged on two things: Time spent here, so those recently arriving from the suburbs needed time to adjust, and the position of a flat or bedroom/s relative to the source of noise. To illustrate, a man who had been in North Beach for six years and lived on the frontline, reported no negative sounds.

> "[O]ur minds programme themselves to block out sounds because we've been here so long. So the morning buses aren't an issue, which they would be if [they were] something new. Or because we're close to hotels there's a bit of nightlife. There's also a casino down the road. [ ] But I sleep through it now, it becomes totally subconscious. It's possibly where we're situated, it feels like a more educated vibe this side, there's security patrolling constantly and cops everywhere. [I]t's very rare to have big disturbances around here."
> ~ Rosco, Courtleigh Heights

North Beach was indeed quiet compared to the rest of the study area. Removing places of entertainment from a neighbourhood or subjecting

them to early closing hours as found in this pocket of the study area allows residential use to dominate, and on normal weeknights, the streets can be as silent as the suburbs.

Seventeen respondents complained of night noise from the street, specifically the raised voices of vagrants, sex workers, 'crazies' or clubbers, and a further 19 of street parties. One in five listed bars or nightclubs as a negative sound, referring to the music and patrons, but also the behaviours that accompany substance-fuelled partying. A single mother led me to a fifth-floor back-facing bedroom and pointed down at MBC's Blue Island bar.

> "My only complaint is that. People start drinking on Saturday afternoon, so by 7pm many are drunk, then the youngsters start fighting on the street. We often close this window because you can hear them swearing. They're from the neighbourhood because it's all year round, every weekend. [A]bout two years ago a youngster died, shot in the head out of anger."
> ~ Radhiya, Cumberland

The drinking and music did not bother Radhiya—just the violence. **Hakeem** (79) across the intersection did not agree, listing "drunken women coming out of Blue Island" as an annoyance. "There really should not be a bar there, in a residential area," he insisted.

Whether his view was tied to his age, religion or other factors is unclear, but Hakeem was the only respondent to speak out against the mix of uses characterising high-density urban areas.

A Muslim mother in Ottawa Court said her neighbourhood had too many bars, but in no way implied that they should not be there. This finding bodes well for the future of urban mixed-use development, suggesting that even in situations where integrated functions and round-the-clock activity have not historically been the norm, people adapt quickly.

Like Rosco, most city-dwellers will grow accustomed to neighbourhood sounds, only being roused by loud, sudden noises. Night noise like that reported by residents of South Beach Central, though, would be intolerable for almost anyone. Twenty percent of the sample listed violent sounds as negative stimuli, one of them on the first floor within spitting distance of "the war outside".

> "The noise level here is very high. It's people coming from the clubs at night, they're drunk, stabbing each other and making noise. In this side street [Tyzack] there's a garage, sometimes they push girls there to rape them and you hear them crying. I'll even pop my head out the window and say, 'Hey, I'm going to shoot you, leave that girl!' Because the girls are also drunk, and some of them are sex workers… and there are a *lot* of drugs, especially right here on the corner."
> ~ Zolile, Sandringham

Jacobs (1961) speaks of eyes like Zolile's that appear at a window when something untoward is going on outside, but I believe few people would be brave enough to intervene similarly in such a situation.



Fig. 167: Some residential windows look onto Tyzack St, but not enough to deter criminals from the narrow, badly lit alley.

The higher up one's flat is, the greater the reduction in volume of outside noises. But piercing sounds (screams; cars being broken into) can still be heard from high up, as confirmed by a lady on the 13th floor of Wavecrest whose coping strategy was to sleep with earphones in.

Event noise was reported by one in ten respondents, all living near one of three outdoor venues: Moses Mabhida Stadium, Golden Mile Beach, or uShaka Dolphinarium. Event noise alone was seldom serious, but compounded by other night noise like that reported by residents a few blocks either side of Pixley ka Seme St, it could make life unbearable.

> "The pubs, the clubs… Oh my! The noise starts around 10pm and goes on until 6/7am the next day—it's the music, bottles breaking, cars hooting, loud conversations, screaming and cajoling… and the fights that start [in Koko's nightclub] and end up outside here. Other negative sounds are the crowds from soccer games with their *vuvuzelas* and the noisy events on West St Beach. They're supposed to set up the speakers facing seawards but it's not enforced, the music blares into town. [ ] Traffic noise isn't too bad, it wanes after 10pm, except for at 2am when these crowds are leaving and revving their engines… and we get the boy racers here too. [ ] As things get progressively worse, people are wanting

to move out because of the noise. Some have already sold.
~ Cali, Willsborough Mansions

Cali had an internalised bedroom, and would sleep with the outer windows closed and the aircon on when the din got too bad. Up in North Beach, with little else to mask noise, a few residents complained of the voices of staff coming and going from the hotels and echoing from the two 24-hour petrol stations. A handful mentioned the mechanical hum of extractors, condensers or other machinery in nearby commercial or institutional buildings, and some frontline residents said they were woken by rubbish trucks cleaning up in the early hours, and the sound of breaking glass.

The contradiction between wanting to feel the buzz of city life and still enjoy peace at the right times is evident in **Levi's** case. Asked why he lived in North Beach, he said because it was "safe and quiet", yet the footballer, whose favourite thing about the neighbourhood was the friendly people, said the thing he liked least was that it was *too* quiet, and he had to go to South Beach to party.

A father-to-be who had grown up in North Beach liked this quality the most:

"It gets quiet at the right time, it's not like South Beach… that's always alive, like NYC by the sea, go-go 24 hours. Here there's a bit of decency, we've ethics, we understand you don't shout outside on the street at 1am… it's more respectful, a balanced lifestyle, one hundred percent."
~ Milton, The Oceanic

It is a difficult balancing act, as Jacobs (1961) acknowledges, to mix city uses in a way that works for all, but it is definitely a worthwhile pursuit, as it bolsters neighbourhood safety and economic sustainability, and makes a place attractive to a wider variety of users.

These vignettes reinforce the uneven urban fabric found in the study area and suggest that opportunity exists, through new and infill development, to work towards a middle road—a neighbourhood not immediately discernible as residential or commercial, but something in between: a proper, hybrid, mixed-use one.

Taxis and Other Traffic

Traffic is the other inescapable characteristic of the urban condition. Traffic noise is most pronounced in the inner city, where the concentration of vehicles is high and there is movement throughout the day, so it correlates significantly with convenience. In dense areas with narrow streets and tall buildings, it is magnified further.

Nobody listed traffic as the worst thing about their neighbourhood, but the noises and behaviours associated with certain forms of motorised transport clearly did impact upon flat-dwellers here.

The same minibus taxis largely responsible for the Beachfront's accessibility and connectedness were also found to be the biggest source of disturbance for residents across the study area. More than three in ten respondents, nearly everyone with windows on a taxi route, took issue with the vehicles, whether they used the service or not.

Toyota HiAce *Ses'fikile* minibuses, manufactured for the local market, have a distinct low-frequency engine sound and stop anywhere along a route to drop or collect passengers. Since their introduction to cities in the last days of apartheid, taxis announce their approach and attract customers with short, repeated blasts of the hooter. The shrill intermittent sound echoing off hard surfaces and between buildings was interviewees' main complaint, followed by loud music with reverberating bass, then the slamming of sliding doors.

Two other intrusive sounds, the calling out of a taxi's destination ('Market, market') and the banging of hands on the van's side to signal the driver, were generated by conductors—typically scruffy youth in high-vis vests who would tout for fares, jumping in and out with alarming speed to usher passengers and collect fares. Referred to more than once as "*whoonga paras*", indicating their association with street-dwelling opiate users, I was told conductors became increasingly problematic, acting aggressive, stealing from passengers, and on the South Beach route, seeking to 'bless' (groom) girls from Addington Primary.

Pamela in Wavecrest told of her involvement with a mothers' group that petitioned authorities to get rid of conductors for the sake of child safety. By the end of 2018, taxi conductors were outlawed in Durban, leaving drivers to operate services alone.



Fig. 168: Minibus taxis are firmly embedded in Beachfront life. (Top) North Beach; (Bottom) South Beach, conductor visible.

Four respondents felt that taxis were the worst thing about where they lived. In North Beach, Metro Police had cracked down on errant operators with some success, aided by wider roads, better visibility and vigilant residents reporting contraventions. But the South Beach taxis were a law unto themselves. They were repeatedly observed flouting road rules—speeding, overtaking into oncoming traffic, stopping suddenly in a turning circle or the only lane and blocking all traffic—and it was common for drivers to jump out to urinate against a wall.

Even regular users of South Beach taxis noted how unpleasant they were compared to other routes. For **Theo** (67) in Port O Durban, taxis were his pet peeve. He disliked "the hooting, the shouting… the whole lot", but it was the disregard for the law that irked him most. "Taxis are a subculture in Durban, especially here in South Beach, they see themselves as having free rein. They have turned this place into a township. I try to ignore it but it's hard, especially when I'm driving behind them."

Theo's comment refers to the genesis of taxis as informal transport linking peri-urban townships and the formal city; he sees them as downgrading the area not by their presence, but because they unlawfully use city space at others' expense.

Other traffic noises were listed by 17 people under unpleasant neighbourhood sounds. Those on lower floors on quieter street frontages could hear engine noise, squeaking brakes and music from passing cars, and those on upper levels, the penetrating sounds of car alarms, sirens and accidents. In the northwest of the study area, residents said they heard up to three serious accidents every weekend at the intersection of Sandile Thusi Rd and the M4. And the night noise in South Beach Central had a traffic component, too.

> "There are only irritating sounds here: all the traffic! *Egagasini* [grill bar] is very noisy, they invite live bands. Even the afterparty for the Vodacom July [horseraces] they come here, and there's a lot of noise and cars, and these bikes… *eish*. These ANC guys like to have their meetings at Coastlands [Hotel], they make lots of noise when they come with their big cars and bikes. They are very arrogant those politicians, the way they park it's as if they're above the law."
> ~ Zolile, Sandringham

One in eight interviewees from all over the study area listed revving engines as a negative sound. Even driven slowly in a single lane with speed humps, the volume and vibrations of the engines, exhausts and sound systems of modified vehicles are intrusive and set off car alarms, leaving wailing in their wake. The sound of passing racers is eventually tolerable, but this is not so for the more deliberate behaviours reported by interviewees.

> "The noise here is mostly just cars, I didn't like it in the beginning but I got used to it, it doesn't bother me anymore. [ ] The only big disturbance is those guys who come and rev their bikes. You'll be sleeping nicely, and a guy will come at 3am and stand there going *'drrrroon dron dron'*... he makes like he's dancing and he does it purposely, so people come to the window and students start screaming for him and he performs for them. [ ] When you have to work in the morning and can't sleep because of this, you might as well just get up and start getting ready. It does frustrate."
> ~ Tesh, Whitehaven

What can be deduced from these reports is that traffic, comprising vehicles used in a normal manner as intended, can seldom be blamed for disturbance in high density areas. It is their unintended or errant use that conflicts with residential functions. Also evidenced is that when urban residents organise, whether by recording license plates and reporting drivers as seen in North Beach or connecting virtually across urban space to lobby for change like the Addington mothers' group, they strengthen a neighbourhood, partake in the making of the city, and stake a collective claim on their right to dwell there.

Crime, Grime and Urban Decay

The findings of this study paint a rather rosy picture of Beachfront life until we get to neighbourhood level, where more serious social and environmental problems begin to surface.

Asked what they liked least about the Beachfront, 55% of interviewees said something to do with vagrants, crime and grime, urban decay, or a combination of these. Crime here is related to high levels of vagrancy, which is linked to the seaside (public spaces to sleep/ablute, food in bins, people to beg from or rob), derelict buildings (places to squat/hide) and the illicit trade in drugs and sex, which in turn fuels crime.

Data on the sensory impact of the above on residents, combined with their experiences and perceptions of personal assault, creates a vivid picture of the urban realm here. What are the implications of this self-reinforcing cycle for spatial justice? How does it affect neighbourhood identity and cohesion, and what can new developments do to address these issues?

Homelessness

According to this research, homelessness and all that accompanies it is the biggest problem facing Durban Beachfront, and over a third of interviewees cited vagrants as their least favourite neighbourhood feature. At the time of research, the destitute population was, by all accounts and from

observation, on the rise. A recent study carried out for the municipality's Safer Cities Unit by the Human Sciences Resource Council counted 3933 people living on Durban's streets and in its shelters. Of these, 75% identified as Black, 84% were male and most were between the ages of 19 and 34 years. Less than half (44%) hailed from somewhere in KZN (EM 2016).

The Beachfront has long attracted those down on their luck. It is safer to sleep rough here than elsewhere in the inner city, as vagrants are afforded incidental protection by the same police and security personnel tasked with moving them on, and the vastness of the back-of beach area means that when there is a crackdown in one place, they just move to another. Those who can afford to stay in downtown shelters can get a bed for R10-R30, space permitting.

The homeless population here come from all walks of life. **Alex** in Groote Schuur told of a middle-class White kid he knew from Umtunzini, who'd got into drugs, left home, and found a spot on the grass above Addington Beach. He survived and supported his habit by digging in bins, begging, or washing or watching cars.

On the same strip of promenade I met a boy (7) of Indian descent, who introduced me to his family sitting nearby. They stayed in a Christian shelter downtown, and his grandma and aunt cared for five or six children who all went to Addington Primary and took turns after school selling stickers and bracelets.

Further North, the grass in front of the hospital was a base for the area's largest homeless population. How many, if any, slept there is unclear, but in the day, I always saw people sunning themselves, sharing vices, chatting or bickering. They were likely attracted to this patch by the mobile soup kitchens that parked in front of the hospital, the range of car-related piece work, variety of ablution options, easy availability of drugs, and perhaps healthcare, too. Here, where residents were few, security patrols reduced significantly.

Up in Old North Beach, I was told that Funworld, with its level changes, rides and vegetation, and the spaces beneath and behind the curio stalls, provided overnight shelter for many.

In North Beach, frontline security was vigilant and prevented vagrants from settling down on public grass, so they would retreat into fenced-off dunes, head up to more secluded beaches or the lagoon, or bed down on fields or road verges a little inland. At time of research, Carpendale Park was the base for a clan of older street-dwellers who kept to themselves and did not seem dangerous but, along with the other itinerant characters standing or crouching alone or in groups, made the park feel unsafe for residents.

Said **Jamila** in Tugela: "Our biggest problem is vagrancy, the people sleeping in the park. They've started cooking and washing clothes here—well they try, but the cops come '*berp berp*' [sirens] at 7am and they have to get out. But they come straight back again." Jamila's husband and daughter had both been accosted for their possessions right outside their building in the year prior to interview.

In the minds of many North Beach residents, the rise in crime was linked to rising homelessness. 'Vagrants' was the term used by most, while others spoke of 'beggars', indicating an issue with a specific behaviour rather than the person as such. Begging was as intense on the North Beach promenade and frontline as it was everywhere else. Some respondents couldn't step outside their block without being harassed, but others had developed a kind of immunity whereby regular beggars avoided them.

Residents in ground-floor flats reported being begged from tirelessly at their windows. Beggars would also approach parked cars and wander beside or onto café terraces, which annoyed some, but the worst affected were tourists, upon whom they preyed relentlessly. Some got aggressive, cussing or spitting at those who did not support them. Being followed or having a stranger enter one's personal space is uncomfortable, and breeds fear.

> "[A]bout 16 years ago, my ex-wife and I used to sit in Carpendale Park, spread out two towels, kick off our shoes, roll a joint and relax. You can't do that anymore. You go to the park for a picnic and everyone's coming up to you asking for change or food. You're too scared to take your phone out there, you don't feel safe. They hang around in gangs, in groups, and you are *skrik* [scared] to do anything. The cops do [nothing] so you've got to be your own guard…"
> ~ Charles, Protea

It is important to note the difference between perceived and actual safety. In addition to vagrants, Carpendale Park had various other users. The well-kept playground at its south end was used by classes from the Islamic pre-school and in the afternoons by children with carers, and the north playground mainly by GCHS pupils before and after school. The park was also a popular break spot for hotel staff, contractors working in/on the high-rises, retirement home nurses, and store employees. On several occasions I saw youngsters kicking a ball around on the grass, only to be 'moved along' by stern adults pointing up at the expansive board listing all prohibited activities, which included ballgames. Very occasionally, the park was used on weekends for activities as disparate as a toddler's birthday party and a production crew making a rap video. Yet aside from cutting through it, no North Beach residents interviewed for this study used the large public space at all. Quite a few, like Charles, felt unsafe doing so.

The general attitude to homelessness here might be described as 'us and them', a function, one assumes, of the glaring inequality between a street-

dweller and a resident in a nice middle-class neighbourhood. Even the feeding schemes to which many local Muslims belonged focused on worse-off areas like Albert Park and South Beach. Direct charity was more common, with long-term residents developing relationships with one or more street people they would regularly assist with food, clothing or piece work. In Wendover, **Neela** (41) was saddened by the suffering and neglect she saw, so once a month she would park outside Joe Kool's and give sandwiches or bunny chows to street-dwellers.

"It's got worse in the time I've been here," she said. "I feed everything—stray cats, monkeys, even the roosters. I wish I could do more."

Sandra (77) in Connemara only left home once a day to take food and water down to the car guards. "It's my way of saying thank you to God that I have a roof over my head."

Jaysen (47) in MBC, who lived alone and worked from home, was glad for the company of his neighbours, the staff at SPAR, and even the local vagrants: "[T]he *outies* who live down here and park cars, I have connections with them as I see them every day and my car's [parked] out so I support them when I can."

Guarding cars is an established way to earn an informal income in South Africa, and the purview of two main groups: indigent locals, often homeless but sometimes just unskilled or unemployed, and foreign Africans who lack permits to enter the formal sector and will likely return at night to budget lodgings. Both groups operate along the Beachfront in turfs that seldom overlap.

The most industrious street-dwellers, typically young Black men, were roving waste-pickers who moved swiftly along the frontline and through side streets with large plastic bags over their shoulders, trawling bins for recyclables (plastic, cans, glass) to be weighed in for cash. They also gathered cardboard from the delivery areas of shops and hotels. These men, I posit, contributed positively to the neighbourhood.

More contentious were street-dwellers who survived by sifting through the wheelie bins put out near-daily for collection outside every block of flats and hotel. Starting very early, they salvaged items for reuse, recycling or resale along with anything consumable. The activity conflicted with residential use to an extent, as sorting waste at source is a dirty, noisy business. Respondents on lower floors near collection points were woken by waste-picking in the early hours, some complained of nasty smells wafting up from the bins, and one in five overall listed the mess left around bins or the people digging through them as an unpleasant sight. It upset some greatly to see how many, especially children, had to resort to this.

At neighbourhood level, most mentions of unpleasant smells (17 in number) pertained to urine, faeces or vomit, typically on the pavement right outside the building. Blamed mostly on vagrants, the issue was compounded near party hotspots where revellers would relieve themselves in alleyways, and in holidays when beachgoers did likewise. Residents on lower floors reported nasty odours wafting up through the windows, including the Jeyes fluid used to scrub down pavements. It was the indignity that bothered some the most: "There are so many homeless people, they don't have proper facilities so they use the street as a toilet, it breaks my heart," said **Lwandle** (29) in Carillon.



Fig. 169: What Grandborough Court calls their 'laneway loo'

In South Beach, attitudes to homelessness were more sympathetic, and interviewees had a clearer picture of different types of street person, distinguishing for example between *osikhotheni* [street-dwellers] and *tsotsis* [criminals, thugs], with *para* [from parasite] used to describe a hybrid of the two. Some here still felt threatened by vagrants, but particularly older Black South Africans expressed frustration bordering on anger, saying that this should no longer be happening.

For **Senzo** (48) in Bencorrum Mews, his daily exposure to *paras* was "a constant reminder that everything is not okay". **Thule** (54) in Hawaii was virtually surrounded by vagrants who squatted the empty row houses behind her building: "I've never had any problems, they don't interfere with me, some even greet me, 'Hello Ma'. It's up to government to decide what to do, we can't fight with them."

But her daughter, soon to return from *au pair*'ing overseas, would take time to adjust. "We grew up in the township but my kids grew up in the suburbs, in Pinetown, so they're not used to it,… it's really something different, another life. It's very hard for them."

We are again reminded of the link between abandoned buildings and homelessness, but also of a common humanity that transcends SES, especially when city space is shared for a protracted period. In a

sense, the vagrants staying here are just as much a part of the neighbourhood as the flat-dwellers.

Lastly, it must be noted that homelessness on the Beachfront is in constant flux. Cycles can be short-term, say when law enforcement has a crack-down, medium-term according to seasons, or long-term in response to urban development. At the start of winter, itinerant street-dwellers arrive from inland, where sleeping rough at this time can cause hypothermia. Newcomers, it surfaced, can disrupt the equilibrium between residents and the local homeless population as they lack accountability and don't know who's who. Some interviewees distinguished between vagrants they knew (and trusted not to interfere with them) and those they didn't.

For ages leading up to the research, South Beach Shopping Centre [SBSC], an open-air mall nestled between blocks of flats in South Beach uShaka, was in dire disrepair and was a haven for vagrants. Said pensioner **Eleanor** (65) in Merion Court: "I used to feel unsafe with the influx of hobo's down here, but a few months ago the police did a clean-up and now they've gone, there's just the usual street people who I know and have always been here."

Most residents were comfortable walking through the mall, although a few felt uneasy.

Sumaya (23) who'd grown up in Port O Durban, felt perfectly safe and took no issue with vagrants, instead citing 'the drugs' as her worst neighbourhood feature: "Addicts and loiterers are an issue, it's wasteful and reduces productivity."

This is perhaps the best example in the study area where this trio of urban issues all interlink.



Fig. 170: The site of the defunct SBSC will be difficult to redevelop for profit due to physical and planning constraints.

Street Crime

In previous chapters, we established that crime as it pertains to flats and buildings is so low on the Beachfront as to almost be negligible, which translates broadly into a better QoL for residents. Moving out into the neighbourhood, however, the situation changes considerably, and a quarter of the sample cited crime as the worst thing about where they lived.

Crimes reported inside the study area in the 2018 calendar year, while mapped to a central SAPS GIS database, were too numerous to illustrate here in any legible format. By far the most cases were car-related crime (theft, break-ins, pilfering), which certainly affected residents but seldom caused fear. Most data on street crime in fact surfaced when interviewees were asked how much they worried about personal safety in the immediate surrounds. Personal assault ("any sort of attack to your being") had happened to quite a few, but to hear of bodily harm was rare. Nearly half of the sample were carefree in this regard, but it made a difference exactly where one lived.

How much do you worry about personal assault?					
	No. of Respondents				
	ZONE 1 North Beach (47)	ZONE 2 Old North Beach (8)	ZONE 3 South Beach Central (23)	ZONE 4 S. Bch Adding ton (4)	ZONE 5 South Beach uShaka (19)
0 Never	25	3	10	2	7
1 A little	16	2	2	1	8
2 A lot	6	2	8	1	1
3 Always	0	1	3	0	3
Ave: /3	**0.6**	**1.1**	**1.2**	**0.8**	**1**

Separating results into the five zones identified in Fig. 164, the disparity is apparent. Six of the seven people who worried all the time about assault lived in South Beach, and those in the busy central part worried on average twice as much as those living in quiet North Beach. There was little consistency within individual buildings, which tells us firstly that the high-rise blocks, irrespective of size, design and security, have less impact on residents' worry than the neighbourhood in which they stand. This concurs with a study which found incidentally that distress levels correlated more with whether the building was in a better or worse part of town than it did with architectural form (McCarthy *et al.* 1985 cited in Gifford 2007). Secondly, it points to the presence of moderating factors. As different types of attack tend to happen to different people, we might expect demographics (gender, age, ethnicity) to play a role, but no consistency was found. Data suggests that the key factor here is in fact a flat-dweller's personality and to a large extent, the relationships they form with other users of city space.

The most common violation reported by interviewees, mostly women, was jewellery theft, where rings, earrings or necklaces were ripped from their body in the street. This led respondents of all types to say they did not wear jewellery in public.

Cellphone theft was the most common crime affecting residents all over the study area, with reports ranging from snatching to drive-by armed mugging. Thieves were not always successful; I heard of victims refusing attackers, running away, ducking into buildings or taking chase. Quite a few respondents didn't carry their phone on them while walking in the neighbourhood.

Some pensioners were afraid to draw money, as ATM crime seemed to be rising, and their standard response was to avoid street ATMs and go to a safer space like a mall or supermarket till.

Violent crimes like rape, grievous bodily harm and murder showed up to a limited extent on police stats, but according to respondents, had not happened in any of the buildings surveyed or to anyone they knew.

A female interviewee was severely beaten four years earlier while having a sunset ceremony alone on the beach in front of the North Beach dune, and during the research, the same happened to the supervisor of Ottawa Court while walking home from uShaka Village one evening. Both incidents took place at least 200m away from the victims' building, in low-density, secluded public spaces devoid of watchful eyes, which suggests that when violent crime occurs here, it does so almost entirely independently of residents and the high-rises they inhabit.

This does not mean that violence went unnoticed. Those who witnessed assault or regularly heard violent sounds all remarked how unpleasant it was. Similar can be said of the various vices found here. Some were saddened to see ladies soliciting outside their building, but others were more wary.

James' least favourite thing about South Beach Central was "the vagrants and pie-vendors [sex workers]. They hang around the robots day and night and come to know your schedules, they can increase your chance of getting attacked as they act as informers," he said.

Street crime was lowest in North Beach, but reports of physical assault spiked in the vicinity of both local shopping centres. In Connemara, **Sandra** (77), had had more than 20 attempted muggings since moving there 18 years earlier. "I'm alert, cautious and don't wear jewellery. I won't let fear get the better of me… it's just part of life in South Africa."

In contrast, neighbour **Caroline** (29) worried quite a bit: "It's happened right down here, it's scary! A guest of ours was held up with a knife right in front of reception, within eyeshot of security."

This difference can be credited to individual personality, life stage and experience. The elder lady, in a form of cognitive dissonance, had been accosted so many times she'd become blasé, while the younger had three children and had not yet been targeted, so her sense of impending danger was probably inflated.



Fig. 171: Sol Harris Cres is a mugging hotspot because solid boundary walls and set back footprints create opportunities for street crime. Visible is the front of Tugela.

Frontline residents here had to cross the park to access Summer Square, a more direct (and ironically, safer) route than the road to its north. High-rise Key West does have elevated windows that overlook the street, but also a blank boundary wall onto a parking lot at ground level. Across the road is Summer Sands, the only medium-rise walled, gated housing complex in the study area. The drive-in estate gave nothing back to the neighbourhood by way of urban form or imageability, housed what one interviewee called "a different sort" of people, and seemed to operate independently of the rest of North Beach. This points to the shortcomings of inserting inappropriate or incongruous built form (a medium-density suburban house typology in a high-density urban area) if a goal is to promote socio-spatial integration and safety.



Fig. 172: Summer Sands housing complex opposite Key West.

Residents who did walk through Carpendale Park had adapted their behaviour. "It's quite safe to walk around here, even at night. I won't take my phone to Pick n Pay after dark though, and I wouldn't go alone," said **Avesh** (24) in Shorelands.

Said neighbour **Anne** (72): "Being older, we are more vulnerable, especially as [my husband] has been unwell. He will not walk through the park at all and watches me from the window if I go in the day. We don't go out at night."

Worry scores in North Beach were quite consistently low regardless of demographic profile, yet this was the only zone where interviewees spoke of arming themselves. In Protea, **Charles** (40) was prevented from getting a firearm for medical reasons, so instead he carried a *sjambok* [whip] or pepper spray when he went out.

Nearby, **Violet** (66) in MBC shared her safety strategy: "I'm very careful. Even downstairs to go over the road I carry a large bunch of keys. I'm hyper-aware and will cross the street to avoid people. I'm clever but not scared. I'd like to buy a gun but my family aren't keen, so I might get one informally… No, I'll just get a new battery for my tazer!"

Here, the firearm was little more than a metaphor for Violet's frustration at feeling increasingly unsafe.

Moving southwards, Old North Beach's back-of-beach strip is recognisable for its two lozenge-shaped restaurant hubs, one housing the long-running Joe Kool's restaurant and nightclub, and has several older established amenities including Durban Surf LSC, Rachel Finlayson public baths, and Funworld. Most residential high-rises here had high a proportion of holiday lets, and others were inaccessible for research, so sample numbers were low. Residents in this zone all kept much to themselves, and those who used the seaside amenities would head straight back home after. A lack of walkable facilities suited to middle-class residents made it all but essential to own a car here, reducing opportunities for neighbours to meet in passing, and the linear built form and transient population made community unlikely to grow. High numbers of visitors and holidaymakers resulted in a high incidence of beggars and pilfering of car parts, and worry around personal safety varied like everywhere else.

Serina (23) in Marine sands said, "I particularly worry about hijacking downstairs. I won't walk alone after dark and try to bring my brother along in the day. The beggars follow and harass you constantly, they're aggressive and you can't argue, it's dangerous, so we tend to stay inside more. It's awful and embarrassing with the tourists… they even beg at café windows, and no-one stops them." A year after moving here from the suburbs, Serina felt safe inside her flat but had not yet adjusted to urban grittiness. Limited interaction with the surrounds made her less likely to be recognised as a resident and left alone.

In Yarningdale, **Alice** (74), who said she never worried, admitted her bravery was dependent on geography. "I do worry a lot when I walk down to West St to visit my daughter in Ottawa Court."

Only 400m, the route crosses into the next zone, indicating how quickly urban character and perceived safety can change from one 'neighbourhood' to the next.

Central South Beach, from Sea View St down to Rutherford St, is the Beachfront's economic heart. It offers an inner-city dwelling experience closely matching that found in much of the CBD, except its seaside location means we find society's most affluent rubbing shoulders with its most marginalised. Most residents here would be considered middle or lower-middle-class, but as found, many live with high indoor densities, low incomes, and little financial security. They may not lead lavish lifestyles, but flat-dwellers here are well-off compared to those living nearby in crumbling lodges, shelters, squats, or sleeping rough, and such inequality creates an environment ripe for street crime.

Mobile phone theft was most rampant in this part of South Beach, with young adult women the main target. To combat this, all female students I met living independently had two phones: a smartphone, and what they called a 'smallphone'—a cheap handset used only for calls and SMSs when out locally.

Young adult Black women were the sole target of another type of assault: the snatching of wigs and weaves. The hair used to make these accessories has high value, and opportunistic thieves rip it out/off and sell it back to a local salon for a fraction.

Unsurprisingly, this demographic group registered the highest worry about personal safety in the dataset. **Mbali** (23) came from semi-rural KZN and had lived in Wavecrest for a year. "You don't take your phone to the Wheel or wear your hair/wig; the *paras*, or even a normal person like me and you, can just snatch it. I know people it's happened to, so I fear for my hair, my phone... you don't even take a wallet, just carry cash in your pocket."

Her least favourite neighbourhood feature was the density. "There are too many people here, I feel crowded. It's fine once you're inside the building, but getting here is another story, it's bustling all the time—with taxis, *paras*, crowds. It's annoying, there's just no downtime."

Amora (19) had lived in South Beach for nine years, but still felt threatened the instant she stepped outside Ottawa Court. "It's very dangerous here, you don't know who to trust. I take my phone with me but won't take it out of my bag in transit. The exact location matters. Here there are a lot of clubs, and gangsters and rude boys running around—it's so crowded you'll get robbed without realising it. Around Hawaii, it's quieter and cleaner." She felt a bit safer in the streets further south, but others did not.

JR (48) in Grandborough Court was shocked that I was interviewing residents a city block back. "*Don't* use Gillespie Street," she warned, "even [my partner] has been mugged there during the day!"

Moving south into the Addington zone, perceptions of personal safety again varied greatly.

After 16 years in South Beach, **Senzo** (48) in Bencorrum still worried quite a bit. "It's happened a lot; people are attacked by *paras* right outside here."

But **Natasha** (38) in Elwyn Court didn't worry at all. "There's never been an incident ever!"

In contrast, **Hazel** (63), the building supervisor, worried all the time about assault, both inside and outside the building. Her job involved managing a high turnover and defaulting tenants, which made her a target. Her fear was not unfounded; about 18 months after her interview, once the lifts were replaced and the access system installed, there was an attempt to hijack Elwyn Court. Hazel was forced out, and the last I heard, was living temporarily nearby while law enforcement addressed the issue.

Finally, in South Beach uShaka, the SBSC attracted dubious activities, but the high concentration of established residents, their diversity in age and race and the absence of nightlife, led to lower crime levels here than the rest of South Beach. uShaka Marine World was also partly credited for this.

Pierre (71), who had arrived in South Beach two decades earlier from Rwanda, now lived in Tenbury with no fear. "In the early years there were many attacks on foreigners, I had two phones stolen. It was dangerous in Point Rd but it's improved, and South Beach has always been better, there's more security and police here because of the tourists."

Down the road, **Blossom** (73) said: "I've lived here for nearly thirty years, my mother lived here in South Beach and I've never ever been, or seen anyone be, attacked. I'm aware, cautious and only go out at night in a car. There's a strong police presence here… I'd say it's safer than up in Glenwood or Morningside."

In this zone, residents hardly worried for their personal safety, except for two young family men who worried all the time.

New father **Zaid** (27) in Ocean Way said, "I fear more for the girls than me, there's lots of bad stuff happening right outside here."

Protection Networks

In addition to the various formal networks dealing with crime on the Beachfront, this research uncovered a host of informal protection networks. What Hentschel (2015) calls 'micro-regimes of safety' are discernible throughout the study area, and correlate directly with localised crime rates, so they are most pronounced where they are essential for residents to safely access their homes and go about their daily business.

In Old North Beach, **Laila** (64) felt her building, Marine Sands, had no real community, but that community could be seen to extend beyond the residents to those working in the neighbourhood. "I instilled that in [my daughter] from when she was in grade school. I'd bring her to the bus every morning and we got to know building security, hotel porters, the taxis waiting on the side. [S]o when it came time for her to go alone, I said 'From now on you *greet* the Palace guard, the High Wycombe gardener and the guy cleaning the floor by the pub, because one day you'll need them. Now they know her and should she ever have a problem, they're there."

A few blocks down, **Kiara** (35), who lived mostly worry-free, didn't feel safe immediately outside her building but said "it's helped by the businesses, restaurants and security guards who know me."

Such gentle safety networks, held together by little more than a smile and a 'Hello', are a good introduction to the full-blown protection networks that flourish further south. More than just co-existing with the homeless population, many South Beach residents had developed reciprocal relationships with them. In Chapter 6, we heard how street children had stepped up to protect **Rajni** (72) in Rydal Mount as neighbourhood crime escalated. Nearby, a lady spoke fondly of the young vagrant she'd 'adopted'.

> "[T]here's this street boy I'm very close to, I can draw R5000 at the ATM and give it to him to carry home for me because I trust him with my life. [H]e respects me like I'm his mother, I met him many years ago here on the street and have taken him under my wing… I ask how he is, whether he's eaten, where he slept last night. [ ] He's around 17 or 18 and looks really intimidating. People say be careful, you don't know the situation, but with [Sabelo] I know where he comes from, his family, the school he went to, why he's on the street, so he's definitely my son. He walks me to the shop, pushes the trolley, waits in the queue, pays with me and escorts me home. He never asks for money unless he doesn't have R10 for the shelter and it rains, or he's hungry and hasn't made enough that day. He helps everybody in the area, but only since people started seeing me with him. Even pensioners at the Parkview feel they can trust him now, they give him like R5 to go to the shop or play the Lotto."
>
> ~ Zainab, Ottawa Court

This reveals the complexity of one-to-one relations in a highly unequal society, and speaks volumes not just about meaningful contact, but trust—how it builds up over time, becomes the key trait distinguishing friend from foe, and how it can spread: "*She* trusts him, therefore *I* can trust him." It also illustrates the balancing of social capital. The young man has certain skills (street smarts, mobility), and exchanges them for things he needs to survive. So while we might expect all residents of South Beach Central to worry about their safety, this was not the case.

Beside China Mall in Whitehaven, single mom **Tesh** (41), who'd lived in the neighbourhood for 13 years, said, "I only worry because [assault] happens a lot in the area, "but I feel protected because I've been here a long time and know people on the street."

Albert (47), who'd lived in Capella for only three years, did not worry about his family either. "We always go out together and accompany the kids. Because we live locally, we're safer, [the criminals] recognise us, they know we could identify them."

Such networks, it surfaced, served Gillespie St high-rises from Sea View St down to Bencorrum in the South, a strip about 750m long. This mirrored the area where the most assaults were reported, and by all accounts, the perpetrators and protectors were often the very same *paras*.

> "We never worry about [assault]. When we have stale bread we give it to the guys downstairs, so if anyone wants to attack us, they will fight for us. We have a relationship with them; it's mostly around food. My wife has a business baking cakes. One day she made a mistake and said she'd bake the client another one, so we took [the first one] downstairs [for the vagrants]. Now my son (3), they call him 'Cakeboy, Cakeboy!' because they know. And he knows them, he greets them when he's going to créche, saying 'Hi, hi!' and hugging them."
> ~ James, Sandringham

Despite its location, no-one in James' building worried at all about being attacked. "People know me!' laughed supervisor **Elizabeth** (70).

Further down behind the hospital, **Charlotte** (26), who'd lived in Bencorrum for seven years, said: "I know everyone, even the *skotheni's*, shopkeepers and guards, so I can walk safely, even at night… my friends from the suburbs think I'm crazy. The protection even extends to friends' cars parked in the street outside, but I've known cars to disappear from *inside* the police station next door."

Finally, in the shady heart of South Beach, the live-in res advisor for DUT's Baltimore hardly worried for her safety.

> "With [the vagrants] we've become like a family. [M]y son was once mugged and they brought back the cellphone because they knew him—they went straight to the guy and said, 'Hey, this is our Ol' lady's son, that's wrong, we don't do that to people who reside here!' It extends to the students, so sometimes they walk them down to the taxi. As much as they are *paras,* in their hearts there is humanity. [ ] When I first came here I almost got mugged. Just outside the building, I don't know where those boys came from, they grabbed my bag, I screamed, I heard 'Eyeyey, *stop it*!' and they ran away… it was very hectic. Every morning and evening you hear people screaming as they get mugged, it still happens a lot here, but not to my students. [T]his morning in the early hours they broke the door trying to get inside, they know once you're in this building you are safe, I don't know who told them. This was a member of the public."
> ~ Neli, Baltimore Res

Two things are notable here. First, the students living here, despite their transiency, are automatically afforded protection through a pre-existing network that hinges on one individual. This is possibly because the building is institutionally owned and students are treated by street-dwellers as a collective, in a way that does not translate to those living independently. Second, the building has taken on a symbolism that extends beyond bricks and mortar, behaving like a safe house or place of refuge: the DUT sign, lights on in the foyer and 24/7 security mean one is less likely to be turned away in a time of need.

This reminds us of the importance of a residential building's relation to the street, so its thresholds and entrances, and challenges us to reimagine how a more reciprocal, welcoming façade might behave in a high-density area rife with crime. It raises other questions, too: Could the kind of protection afforded the Baltimore students by virtue of their belonging to the residence, somehow translate to the community in a block of flats? What if the building itself offered something of value, a space or service, to the neighbourhood's disenfranchised? And could a mixed-use building become a mechanism for acquiring, exchanging and producing social capital in a way that reduces inequality and promotes spatial justice?
The findings of this study suggest that it could.



Fig. 173: The pavement outside the entrance to Baltimore Res, a stage for the 24h neighbourhood 'street pantomime'.

Urban Slide

One in five interviewees said the thing they liked least about the Beachfront was urban decay. Decline, degradation, deterioration—these terms all suggest buildings and public spaces that are unclean, run down, derelict, squatted, or unsafe for use. Strictly speaking they are relative terms: are we comparing the situation to 25 years ago when we moved in, or ten, or one? Or perhaps where we lived before, or a place we have visited or seen on TV? In most cases, the term seemed to imply a normative, the way things 'ought' to be. Overall, participants demonstrated a strong sense of social and spatial justice in this regard.

Problem buildings are a clear indicator of urban slide. Broken windows, boarded-up openings, collapsing roofs and plants growing in gutters signal that a building is no longer cared for by its owners. Very few bad buildings are found inside the study area. The two vacant buildings in North Beach—Carpendale Park substation and Star Homes behind the Elangeni—belong to EM and are well-secured. Near uShaka, SBSC's open air design and glass shopfronts make it impossible to squat surreptitiously, so the only real problem building here is 11-storey Palm Beach Hotel in South Beach Central.



Fig. 174: A feasibility study found that the ex-hotel, valued at R10.8M, could accommodate 42 social housing units of 45m2

Bought by KZN DHS&PW in 2010 in an effort to fast-track housing delivery, Ottawa Court's neighbour the Palm Beach Hotel was, according to locals, occupied by drug lords shortly after and run as a nightclub and brothel. In mid-2017, calls for proposals to redevelop the block as social or student housing attracted no suitable bids, and Ward 26 residents, it was reported (Cole 2017), objected to the building's disposal and wanted it made available for them to buy or rent into. The hefty renovation costs make it unlikely they were seeking to profit, but rather saw an opportunity to uplift the neighbourhood. A radical proposition that we don't currently have fiscal models to support, this recent resident-led initiative is nevertheless relevant as it evidences a local appetite to get involved with the collaborative making of the city. At the start of research, the building's occupants had just been evicted and it was guarded 24/7.

Just to the study area's west are droves of problem buildings that certainly did impact upon South Beach residents. "If they could just demolish all those empty buildings down in Point Rd [ ] that are occupied by anyone—*eish*, they make the city look bad! I don't walk there after dark, I'm afraid. People stay there illegally and can throw stones, big things on top of you," said **Zolile** in Sandringham.

His frustration was echoed by **Tesh** in Whitehaven: "The crime is directly related to urban decay and these derelict buildings. We're not supposed to have this by now, since the changeover. The government is responsible, they should've gotten over the teething problems after twenty-four years."

In Bencorrum, this narrative was reinforced. "There are no *skotheni* by uShaka or on the Point because people live there and use the space. Here, there's not enough done. Government must demolish these [bad] buildings and redevelop flats or housing. I've watched things decline since moving here, municipal responsibility is not being fulfilled," said **Senzo**.

In August 2019, the municipality announced the creation of a Problem Buildings Division to "transform the inner city into a space for investment and where residents can live, work, study and play" (Anon. 2019). Eighty bad buildings were identified, almost half in the Mahatma Gandhi (Point) precinct, and a month earlier, the squatted row houses behind Hawaii were demolished. By time of writing however, the Palm Beach Hotel building had decayed visibly, with trees having taken root at different levels, and signs of inhabitation (open windows; makeshift curtains) had reappeared.

Urban decline implies a lowering in the economic profile of a neighbourhood. Disinvestment can be a cause and/or effect of this process. When established businesses see a reduction in patronage, they move out, to be replaced by smaller, independent shops, which also often struggle to survive, as spending power decreases but rents do not. Small occurrences like a longstanding shop or restaurant closing, or empty venues with TO LET signs, can have a knock-on effect. Unable to attract or retain tenants, they signal to investors and businesses to stay away.

Over the course of the research, North Beach, with MBC at its heart, was observed to be in slow, steady decline. Vrushik's Vegetarian takeaway, a culinary institution at least 20 years old and run by a family of Krishna devotees in Carlton Towers, closed shop in 2018. The proprietor said it became difficult to make

ends meet as their customer base eroded and those left in Durban were reluctant to drive to the ever-seedier mall, particularly at holiday and festival times. The shop stood empty for a time, and was occupied by three subsequent eateries which did not survive the high rent and low footfall. The other small shops and takeaways in MBC were forever changing and subdividing during the research, trying (it seems) to find a viable configuration. When an area is seen to be declining, owner-occupiers find themselves compromised, especially if the flat is their only asset and its value outweighs their earning capacity. When levies, which rise with inflation and are subject to special maintenance additions, are no longer affordable, owners risk losing their flat and ending up homeless, as had happened to **Mpumi** (55) in Rydal Mount. **Violet** (66), whose income from her hair salon in MBC had declined steadily over the years, worried all the time about this. "When is the right time to sell? she asked anxiously.

Two other instances of disinvestment were witnessed during the research, one of them the closing of the flagship store of Afro's Chicken & Tjips. The yellow shipping container on the promenade in front of Fairhaven provided shaded seating, bicycle and surfboard racks, and served mainly fitness users and casual drive-in businesspeople who would stop for coffee or a meeting. At first they did a good trade, but the venue was exposed to ever more hostile weather and strong winds, and this coincided with the rising number of vagrants who eventually sat right on the stairs, begging from customers just metres away. Around mid-2019, I noticed the container had been sealed and painted white, and was told Afro's management had decided to close the branch after it was robbed three times in rapid succession.

Finally, acclaimed African-themed restaurant Moyo, which occupied the sea-facing part of uShaka Village and a custom-designed satellite building on the pier, closed their doors in 2019.

These vignettes tell a cautionary tale. People with money to spend are disinclined to run a gauntlet to get where they are going, and here, high-end amenities simply cannot function as urban satellites or rely solely on local support; they need a critical mass of potential customers within walking distance (so sufficient mixed-income residential density) as well as safe parking for outside patrons.

Urban Management

Urban Improvement Precincts (UIPs) are found the world over, and serve as vehicles to uplift inner city neighbourhoods. In Durban, the UIP mechanism is based on a 2004 Municipal Act which makes provision for the establishment of defined geographical areas known as Special Rating Areas (SRAs). Administered by a NPC, a UIP enlists private security and cleaning companies to provide top-up services to maintain and protect public open spaces. UIPs are jointly funded by the municipality and local business and property owners, and answer to a ratepayers' committee. The newest of Durban's three inner-city UIPs was South Beach UIP, the boundaries of which roughly coincide with the area I called South Beach Central, but exclude the two blocks north of Pixley ka Seme St.

While scoping in 2017, I spoke to a UIP security guard parked in front of Pasadena on OR Tambo Parade. He described their difficulties, armed only with batons, radios, a van, and two guards per shift. At night, he said pointing at China Mall, the streets here were full of drug peddlers. At first, the UIP had arrested them and taken them to Point police station, but 15 minutes later they were back, boasting. Now if they caught the guys, they would drive them to a secluded place, give them a good 'hiding' and return them to the street. I cringed to hear that the strong-arm, liminal tactics associated with the old regime had found their way into the present day under the guise of urban improvement.

Jeff (54) in Maldonado cited lawlessness as his least favourite thing about the neighbourhood. "Nuisance bylaws are *not* upheld. We pay UIP fees every month (I pay R197), it's compulsory, yet we get nothing back—I'm not happy. They fancy themselves as the police, they spend most of their time in Gillespie St rather than here. Metro feel it's too menial for them to deal with carwashers or music, and blocking off access doesn't work… everyone (police, cleaners) drives straight over barriers and curbs. [I] call the Metro Police every night, they do nothing. I worry about property value, not wanting to live here anymore… everything."

While he appeared to have a valid noise complaint, I sensed the principle bothered Jeff more—not only that some people repeatedly got away with doing as they pleased, but that those hired to enforce laws did not follow them. This sense of injustice can contribute to a growing feeling of powerlessness, as reiterated by **Adam** (29) a little way down the road. "The noise from car bars and parties really upsets me. [ ] I used to call a few times a month, but Metro have been good recently, they do their rounds at 8/9 o'clock so it's got better, but I get annoyed at the UIP not doing what they should. Broken systems make me feel helpless, panicky, trapped."

It is not my intention to assess the efficacy of the South Beach UIP, but it is safe to say that their job was not easy.

A North Beach UIP was created in 2016, and the first security vehicle appeared in Carpendale Park around mid-2018: a small hatchback branded with Love Durban UIP's heart logo. Unlike South Beach, its urban problems were not dire enough to classify North Beach as an SRA, so the UIP runs on voluntary contributions from businesses and residents. At time of writing, I'd only heard of hotels contributing, and the few older owner-occupiers I spoke to voiced strong

resistance to paying extra for a function they believed should be fulfilled as part of their rates. More than once, invitations to join the UIP were rejected outright by managing committees and not passed on to building occupants, some of whom might well have chosen to contribute.

In contrast to South Beach, this UIP's operation relies on volunteer private sector contributions, so their focus is on fostering neighbourhood pride.



Fig. 175: The banner on Love Durban UIP's Facebook page.

The only part of the central study area not covered by a UIP—the four city blocks between Sea View and Pixley ka Seme Streets—was by all accounts the place that needed top-up urban management services the most. In Willsborough Mansions, **Cali** (51) lamented the "urban decay and loss of control over the surrounds", and worried about property values. "This really shouldn't be a place where vagrants can easily mug people," she said, gesturing to the police depot in Victoria Park.

Her neighbour, Riaan, who stopped by during the interview, had strong opinions on this: "The Muslims in North Beach look after their area, they run their businesses there. You can see, there aren't many vagrants, it's *clean.* But when the CPFs clean up North or South Beach we're inundated with vagrants. We're in the middle, so everything gets pushed here."

The crew of car guards and car washers in the parking lot in front of the building fitted into this narrative. "Those informal activities would be fine if they were regulated, but they're not," explained Cali. More than just parking, the lot was reportedly used for "partying, peeing and pooing" too. "Oh, the stench!" she said. "We used to scrub outside here with Jik three times a day."

"You can see," said Riaan, "the entrance has a cantilever? We've now put those rails up flush with the building because that's where people were urinating."

Cali continued: "In season, it's the braaiing and selling of raw meat here on the pavement. You buy it from the guy sitting here and the guy with his stand next door will braai it for you. I mean, the stench of that meat burning, we close our windows because it comes right up, and then the flies are everywhere… And they leave a mess. The whole Christmas month, right through until the second or third week of January, you're sitting with a filthy place in front of you. The last four years it's deteriorated, it's been horrendous."

I asked whether law enforcement got involved. "We phone Metro, but I think over that time they leave them to do whatever they want."

The buy-and-braai *shisanyama* is well-established in township culture, and partying around a car is not a new phenomenon in South Africa. A hangover from apartheid, when non-Whites were excluded from public spaces and venues, these informal behaviours have burgeoned in recent decades and are now a common sight in urban areas.

"We proposed to [the City] to close off this parking lot and manage it with boom gates, or hand it over to us and the hotels as private parking. We will pay [them], collect and manage it. But they said they can't do that."

Towards year-end I saw a municipal safety officer seated on the porch of Willsborough Mansions—a sign that some headway had been made.

Missing Facilities and Opportunities

A major challenge in an area like the Beachfront, where residential use must co-exist with the tourism and entertainment necessary to its economy, is catering for a huge variety of users in terms of SES, lifestyle, and duration of stay. Secondly—and this is relevant to the development of mixed-use, mixed-income neighbourhoods—meeting the needs of residents with widely differing tastes and resources is tricky from a business perspective. For example, a Polish film director staying at Tsogo Sun in North Beach will likely have very different daily needs to a single mum who works half days in retail to support two children and pay rent on a Prince St bachelor flat. Nowhere is this more apparent than when it comes to food.

Supermarkets cater for regular shoppers and are unlikely to stock products that don't sell quickly, which is fine if there is some homogeneity in the population (as in North Beach), but more challenging if local residents reflect real socio-economic diversity (as in South Beach uShaka). The only supermarket in the study area stocking a range of products adequate for most middle-class households is MBC's anchor tenant, North Beach SuperSPAR. With an in-store bakery, Halal butchery and large produce section, they also stock specialist items from *okra* to flip-flops. The store was the go-to for many of the more affluent respondents

living in Zones 2 to 5, as the supermarkets near them (Shoprite, PnP China Mall, and South Beach KwikSPAR) had little of what they needed. Worst-affected was South Beach uShaka, which had only two spaza shops and an independent, basic supermarket. Middle-class residents here had adapted by buying what they needed outside the area, but the dearth did not go unnoticed.

Asked what one thing he would change about his living environment, **Philippe** in Port O Durban said, "We really need a commercial centre nearby that is of good quality, with basic functions and services."

At time of research, residents seeking free-range or organic produce, lactose-, preservative- or gluten-free goods, or healthy convenience foods, had to go elsewhere. Such products are stocked by upmarket retailer Woolworths at prices to match their quality and sourcing credentials, and at least a third of the sample regularly shopped there, with a handful saying they went nowhere else.

In Fairhaven, vegetarian **Adam** said the thing he liked least about South Beach was its "distance from the nearest Woolworths", pulling a face to show he was aware of the privilege implied. There are four stores dotted around the inner suburbs and one in town, which I asked about. He raised his eyebrows. "It's like a strange cross between a Woolies and Boxer Stores. There's nothing green in there!" Even they seem to have adjusted their offerings to cater for the regular clientéle.

So although the supply of goods and services in the study area existed in equilibrium despite the uneven spread of facilities, this research confirms that middle-class residents are not attracted to the Beachfront for this reason, and often live here in spite of it. It also points to gaps in the local market that could be addressed by inserting anchor tenants such as supermarkets into new mixed-use buildings.

A glaring absence across the study area was the lack of after-school facilities for children: safe, supervised places to play, partake in sports, artistic or cultural activities, and quiet places to read, research or do homework. Even more than suburban children, urban children living in higher densities need such spaces.

Older studies found that high-rise dwelling children displayed more behavioural problems, but a 2002 study by Taylor, Kuo & Sullivan found that access to green space and nature, even in the form of views, may well ameliorate such negative effects (Gifford 2007).

The tiny public library in Victoria Park has a good children's section, but is typically packed with jobseekers, pensioners and students, and is too far from any schools to be walkable. South Africa does not have much history of such facilities, so their absence was only remarked upon by a young mother whose life as a youngster had revolved around her rural town's community centre. Her biggest worry was that, living in the city, her children would be led astray.

> "When I first moved to North Beach there were none of these problems [crime and drugs], there seems to have been a hike in the last four to five years. It's kids doing that stuff, we've seen boys who've grown up here get into drugs, it's very sad. I feel like it's related to GCHS, they bunk school and come here, get changed and get up to mischief in the park. [ ] There are no facilities around here—pools, youth clubs, dance clubs etc. I had all those things growing up, I only got exposed to bad stuff when I moved to Durban."
> ~ Caroline, Connemara

This suggests a further opportunity for new mixed-use development to accommodate one or more viable social amenities aimed at youth, whether they are indoor or outdoor, or focus on educational, physical or emotional wellbeing. As with recreational amenities discussed in Chapter 10, potential exists to partner with local government on an 'urban acupuncture' approach, to insert such facilities into existing neighbourhoods and render them accessible to all urban youth.



Fig. 176: The skatepark, popular with local youngsters and those from elsewhere in Durban, forms part of the successful WC2010 North Beach node upgrade. Grosvenor Court (left) and Elangeni Hotel (right) overlook the old sunken gardens.

The last theme arising at this spatial level, mentioned by roughly 10% of the sample, was missed opportunity.

Adam in Fairhaven worried about the future of both building and neighbourhood. "I feel invested here, there's so much potential but also some sadness that it is unrealised. The worry comes from responsibility. Should we be living here? Should we stay or go?"

The young father was speaking of emotional rather than fiscal investment, and his duty to his family in terms of safety, QoL, and perhaps also the chance to belong to a community. He was expressing a desire to uplift his home city and support South Beach's economy by showing faith in a place where few of their friends would consider living.

Missed opportunity was elaborated upon by a handful of respondents, most of whom lived in North Beach.

> "I've seen lots of businesses move out of here, MBC used to be great but no longer. We need *real* shops: a butcher, grocer, bakery, dress shop, homewares, bank branches… even entertainment like tenpin bowling. I think it's because the Beachfront is not affluent enough. An ideal building for me would have almost everything you need on site: a doctor, dentist, lawyer, gym, swimming pool, garden and pub. In the end, the whole Beachfront feels totally underdeveloped."
> ~ Gary, Montezuma

This interviewee was comparing the neighbourhood to years earlier, and also maybe his experience of life abroad. He instinctively described a mixed-use development that adds value not just for its residents but the community at large, one that is integrated with, not segregated from, its surrounds. Where Gary lived, the public realm's immediacy is inescapable, but 300m south in Grosvenor Court, built fabric all but disappears and one feels removed from ground level and the rest of the city.

Milo (66), who had bought a flat there with his wife 35 years earlier and was totally satisfied, had this to say about the neighbourhood: "There is missed opportunity here. We should be like a California boardwalk with music, shops and boutiques. Things should be full all the time, with more *al fresco* dining and social interaction, it lacks *life*!"

Like Adam, it saddened him to see a place he loved not fulfilling its potential.

Finally, sporty **Cora** (52), who was satisfied with her high-rise living situation in Shorelands, said she missed a sense of community, especially after hours—"places where you can go and *kuier* [meet/visit] in the evenings, so nightlife and social life. There are no mid-level eateries around here, it would be so nice to have places with affordable, healthy options and drinks where you could linger and chat, something between a hotel restaurant and a takeaway."

These respondents suggested some facilities and activities they felt were needed in the area and would elevate the Beachfront's economic profile. Such additions could also, I propose, serve as catalysts to attract investment, and address or ameliorate some of the urban issues—and thereby inequality—found here.

Conclusions

The findings at this spatial scale reaffirm the initial adoption of neighbourhood as a social construct. Zones were seen to overlap to varying extents, hold different meanings for different people, and change continually over time as residents came and went. All zones share adjacency to nature and to high quality public space, which draw visitors from far and wide. This strip of urban fabric can be likened to a giant sponge—a porous, permeable organism that absorbs and releases high numbers of people, simultaneously permitting others to pass through and around it.

The seaside is critical to these neighbourhoods in two ways, first as break-out space for residents living in high densities, and second as an economic attractor. In Chapter 9, we discussed the physical disadvantages of living near the sea—its corrosive effect on buildings, and their vulnerability to extreme weather and rising water levels—and how these can be mitigated by innovative design solutions that rethink our relationship to space, materials and the ground plane. As such, the ocean's disadvantages are far outweighed by its advantages. In a sense, the seaside here acts as an equaliser, a space in which difference all but dissolves. This effect, I posit, will be magnified by creating more varied and accessible housing in the study area.

This applies similarly to convenience. Inserting new, mixed-income housing into a well-located urban neighbourhood like the Beachfront opens up a plethora of choices for residents—of flat type and tenure; how they prefer to get around; between more/better goods, services and activities—and this is an important consideration in reducing inequality and bolstering spatial justice.

Consolidating walkable neighbourhoods that are safer, and using infill to insert facilities not found here, will reduce car dependency and with it, carbon emissions, the stress of car ownership, and the dead space required to park cars safely at night. It also makes improvements in public transport more feasible, and supports the formation of NSTs by getting more people out on foot in the vicinity of their home.

An inescapable feature of inner-city living is outside noise, especially at night. Flat-dwellers who struggle with traffic or other intrusive sounds can move further away from the source of noise, so to a flat on a higher floor or facing away from the road, disco or parking lot, but this is not always desirable or feasible. In existing environments where old urban form must accommodate novel, ever-changing uses, noise-cancelling strategies at personal, unit and building level include barrier devices ranging from earplugs to double-glazed windows.

When new buildings are inserted into existing fabric, care must be taken to respond to how public space is used locally, group together compatible functions and avoid clustering populations in ways

that invite problems. New buildings can be designed—in form, materiality and planning—to respond to all we already know about how dense cities work in the 21st century. The aim is not to eliminate outside noise, but to rein in excessive and unnecessary behaviours that conflict with residential use. One approach shown here to be effective is consultation between various stakeholders, even if they are as disparate as a mothers' forum, a motorbike racing club, and a political events team.

The urban issues of homelessness, crime and urban decay are shown here to have largely been circumnavigated by humans acting as infrastructure. While crime does occur on the Beachfront, the likelihood of a resident being a victim of violent crime in the vicinity of their home is extremely low, and reduces further the longer one lives here and the more they interact with others in the neighbourhood.

Our existing built fabric is designed around exclusion. Walls and fences separate rich and poor, private and public, old and new—yet flat-dwellers here have invented ways, often informal and quite ingenious, to invalidate these barriers. Residents who were open to forming relationships with dissimilar others, able to look past socio-economic difference, respect others' life choices, and adapt to change, were far safer and happier living here. It could be said that social integration is already happening here despite spatial segregation, and that it is high time for architecture to catch up.

What is clear from the research generally, and the tale of the parking lot outside Willsborough Mansions specifically, is the mismatch between local bylaws, which have changed little in 25 years, and the way South Africans live today. Instead of attempting to return to an old way of life through heightened enforcement and exclusion—for example, the privatisation of public open space or street parking—it is imperative to spatial justice that we find suitable ways for the built to environment to be shared by all. This can be done by inviting participation, updating legislation, and innovating to create mechanisms that permit the testing and improvement of new solutions. For 'wicked' problems like those characterising the Beachfront's urban realm, tweaking one part of the system can affect exponential change elsewhere. A single, well-considered built intervention can ignite neighbourhood transformation, invite subsequent investment, inspire others to adopt/adapt new models, and even reverse the trajectory of urban decay.

The findings of this study were concluded with quotes from respondents who saw fit to dream. This is perhaps one of the things that makes us quintessentially human, yet in a world where most people spend every waking moment hustling to survive and pursuing a better QoL, little time is left for dreaming.

Those who formulate policies, channel investments and kickstart development tend to operate in an abstract space, removed from the lived reality on the ground. Who, then, is to be tasked with translating dreams into reality? This responsibility, I argue, rests with society's problem-solvers—researchers, sociologists, designers, creatives and entrepreneurs—who, in different ways, are best placed to translate between the status quo and those capable of affecting real urban change. They have the skills to articulate ideas and proposals, and visualise scenarios in ways that let others imagine how a more equal, spatially just city might come about and just how great it could be.

To transform our built environment, I posit, we must reconceptualise not only verticality and density, but also the duty of each individual building to its surroundings, as well as the duty each and every one of us has to broader society.

Chapter 12:

A Shweshwe Quilt

Conclusions and Recommendations

Part I: Conclusions

> "This is a fundamental view of the world. It says that when you build a thing you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it."
> (Alexander *et al.* 1977: xiii)

The worldview articulated in the above quote from *A Pattern Language* aligns closely with the premise of the present work: that architecture and those who produce it not only have the power to improve society, but the responsibility to make every effort to do so. This research fills a big gap in South African scholarship around integrated housing and urban density achieved through vertical construction. It goes a step further to suggest how such housing might contribute to the pursuit of spatial justice, based on data gathered about dwelling patterns and user satisfaction in existing local environments.
Here, I adopt a normative approach in proposing how the object of study, the residential high-rise, might be improved in this context. As its primary output, normative research produces a theory of practice for a professional activity, in this case the design and development of buildings, and here I will propose a new model for integrated urban housing.

Distinct from a site-specific design proposal, a model is concerned with a strategy for *doing*—developing, operating, occupying—rather than the specificities of form, materiality, or expression.

Here, context-specific research findings are interpreted to be more broadly useful to anyone pursuing socio-spatial residential integration in a similar urban environment. Conclusions drawn from the various spatial levels investigated, and the ideas and solutions derived from the theory, literature and architecture reviewed, come together to shape a new vision for spatially just high-rise housing. Imagining forward from an empirical base, Part II of the chapter comprises a suite of recommendations for designing and developing a Verticolapa. These guidelines, inspired by Alexander's Patterns that together form a language, are likened here to individual swatches of an intricate local fabric, stitched together to form a quilt.

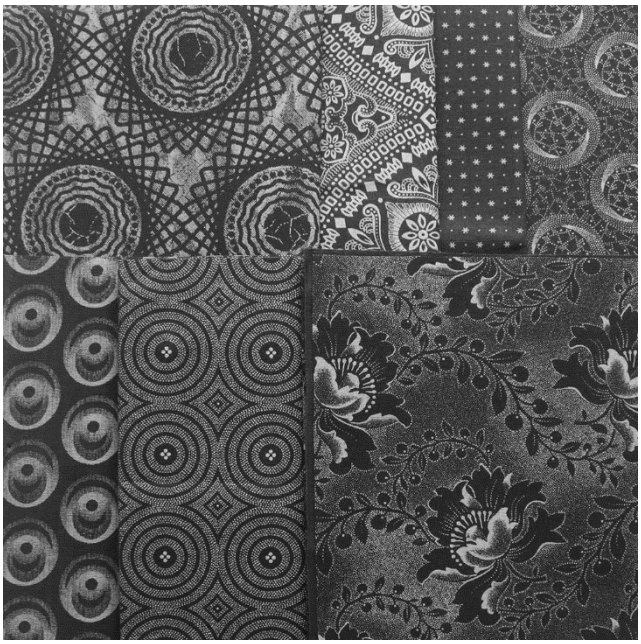


Fig. 177: Ornate printed *Shweshwe* fabric, originally indigo, is widely used to make traditional skirts, dresses and aprons.

Durban Beachfront began as a windswept stretch of dunes on South Africa's east coast, found its beginnings as a military and trade hub of Port Natal, and then expanded northward with economic and population growth before arriving at its status as the country's most popular holiday destination.

Following on from its colonial beginnings, spatial segregation by race and social class remains visible in urban settlement patterns, where formal White areas are seen to contrast with informal non-White ones (Kearney 2002). When the Apartheid government came into power, non-Whites were excluded not just from owning or renting homes on the Beachfront, but from using its public spaces. The first GAA was passed in 1950, and by the time it was repealed in 1991, most available land in the study area was already built up. Blocks of flats were occupied by Whites from all income brackets, and people of colour came here solely to work.

Post-democracy, residential mobility meant the racial and economic profile of those inhabiting the study area changed completely—but instead of

tipping to become single-race once more like other South African inner-city areas (Oelofse 2003: 93), the Beachfront retained a relatively high proportion of historical residents who integrated with newcomers. This resulted in a string of localised populations that, while they differ with geography, together reflect Durban's broader demographic make-up. While racial mixing occurred naturally to differing extents within buildings and neighbourhoods, the built environment itself hardly changed.

There is certainly opportunity—to a limited extent inside the study area and on multiple parcels of land just outside it—for adaptive reuse, infill and greenfield residential development, but efforts so far have been restricted to rental social housing and, as evidenced by on-going struggles to develop the Palm Beach Hotel in South Beach Central and the Star Homes site in North Beach, progress is elusive.

Government structures by nature are risk averse, and cannot procure anything with too many unknowns. Tenders, even for design services, are awarded on pricing and affirmative credentials rather than the quality of ideas or past experience. Projects are subject to lengthy administrative and financial processes which often render them non-starters. This developmental stagnation is linked to several complex issues, one of which is the rigid dichotomy between private and public development. Here, there is no middle ground. Both housing development modes serve only one segment of the population, and units are designed for a generic, anonymous clients and occupied afterwards, which is a barrier to creating more integrated, spatially just living environments.

A key stumbling block, I posit, is the absence of non-profit intermediate bodies that combine the interests of both the private and public sectors. The Johannesburg Development Agency (JDA) and Cape Town Partnership (CTP) are examples of public-private partnerships that demonstrate the benefits of more agile management, procurement and operational processes at precinct scale, but at ordinary site scale and with respect to the development of new housing, such collaborative structures do not yet exist here.

Think, Write and Build No Evil

Concerned with spatial justice and the city, Chapter 2 begins with a discussion around inequality and urban form. Of interest here is the work of Henry George (19th century) and Jane Jacobs (20th century), as both identify what they believe to be the main culprit in this scenario—in one case, private property owners and landlords who accrue and speculate on city land, and the other, spatial planners who rupture city fabric with huge, monotonous developments—and propose ways to address such inequality (Obeng-Odoom 2015). Here, Neoliberalism is proposed as a third culprit, as it is seen to emphasise the rights of the individual (to purchase and profit) over collective rights (to shelter and QoL). Urban inequality, it seems, can almost always be traced to this disconnect, which translates loosely to the disconnect between the exchange value and use value of urban land.

More recently, scholars are fashioning new ways to think about cities; ways that accept plurality, ambiguity and ambivalence, and which recognise value not just in each and every actor in urban space but also in the exchanges between them. It is these millions of everyday transactions that validate people's existence, and move city life forward (Simone 2004; Hentschel 2015; Marx 2022).

Having established that space is socially produced and that the Right to the City—the right to access, occupy and participate in the making of urban space, regardless of who we are or how we choose to live (Lefebvre 1996)—is universal, we looked to countries such as Brazil which have made headway in supporting this right (Friendly 2013). Some of the reasons for the perpetuation of a fragmented, unequal urban fabric in South African cities are discussed here, and housing is key to this discourse.

The single biggest challenge to spatial justice in our built environment, I propose, is residential segregation—not by race as seen in the past, but by income bracket or social class. If society continues to house people in clusters with 'like' others according to the house form and tenure deemed appropriate for that group, stereotypes and notions of difference are perpetuated, reinforcing inequality and injustice. Separating groups in this way deprives people of the opportunity to meet dissimilar neighbours who may enrich their existence, whether by deepening empathy, exchanging knowledge, ideas, goods or time, or simply belonging to a community in the more traditional, face-to-face sense (Young 1986; van Leeuwen 2010). Moving from spatial segregation to integration is a slow process that involves refashioning the built fabric in various ways, making it denser, more connected and diverse, and filling urban voids with programme that bridges between existing land uses and communities. Digital analyses performed using Space Syntax methods, have demonstrated that segregated urban space tends to maintain the status quo, while integrated urban space enable transformation and societal progress (Hillier 2008).

In South Africa, one must select from or settle for one of a suite of existing housing types, few of which fit into a wider strategy for sustainable urban transformation or reflect the socio-economic and political changes of the last 25 years. This research has identified a mismatch between the rigidly defined containers available today, and the kind of spaces needed to support the fluid dwelling patterns of the modern African city well into an uncertain future. Of concern is that the rift between the property-owning and vulnerable middle classes is widening, and will continue unarrested unless new housing solutions are

sought, tested and refined. Chapter 3 looked at ways in which this has been done around the world.

Much can be learnt from the long tradition of housing co-operatives in Germanic Europe, and how one citizen-led body in Zürich commissioned expertly designed, mixed-use architecture on a difficult-to-develop site, making quality homes available to those in all income brackets (*https://www.kalkbreite.net/*). In Melbourne, efforts to reduce environmental impact, embrace the sharing economy, and build affordable homes that put people before profit, led architects to adapt co-operative models for local needs and conditions (https://nightingalehousing.org/).

A long tradition of mixed-income housing has given the Dutch the knowledge and experience to house a growing population in brand new neighbourhoods where families of differing SES live side-by-side, and they have mastered cross-subsidisation to the extent that fully integrated affordable housing is now produced with little or no government intervention (van Boom 2018). In the US, mixed-income housing has been created in many different forms over the last 30 years, primarily to address existing residential segregation of low-income, typically ethnic minority groups through the renovation and adaptive reuse of failed social housing projects and neighbourhoods in decline. The findings of extensive but dated post-occupancy research on MI housing, while mixed, are nevertheless useful in considering the practicalities of production modes, mixing ratios and fiscal models (Brophy and Smith 1997; Rosenbaum *et al.* 1998).

Locally, Cape Town's mixed-use, mixed-income Conradie Park, a public-private partnership that is under construction, delivers medium densities in a suburban setting at what Jacobs (1961: 290) calls 'cataclysmic' scale, and should be monitored closely to establish which aspects of this model work to inform smaller, site-scale interventions in dense urban areas.

In London, new fiscal models such as Shared Ownership piggy-back on high-end development to create more affordable housing, and serve a similar market to gap or FLISP housing locally, letting first-time buyers access and own, in part or whole, homes that would otherwise be out of reach. And in Japan, new projects designed by renowned Architects push the boundaries of domestic architecture by entirely rethinking notions of privacy, family, community, sharing, and our relationship to urban space (Maak 2015). Such work shows how the public/private dialectic can be understood as a continuum rather than a binary, and the potential that holds for future collective housing.

The built projects studied here all contributed in some way to help imagine how housing locally might be produced in a more spatially just manner. Here I introduce the Verticolapa: the vertical, dense, diverse living complex of the future, whose aspirational qualities come under scrutiny in Chapter 4.

There are various reasons and methods behind building homes ever higher in the sky. At first, the highest spaces accommodated the poor, then later the early-20th century cosmopolite of means. High-rises were then built as supposed equalisers (social housing), later by necessity in land-poor cities, and now increasingly, are constructed as luxury enclaves for the wealthy.

Living at height was initially believed to be unnatural, so when mass high-rise social housing projects started to show disastrous consequences for inhabitants, elevation was blamed (Jacobs 2006), yet no single study could prove that building height alone caused poor mental health, social isolation, delinquent or criminal behaviour, or any other such ills (Evans *et al.* 2003; Gifford 2007). Instead, literature suggests that two main factors were responsible. The first was residential segregation by SES; the clustering together of high numbers of low-income households into enclaves separated from the rest of the city. The second was Modernist architecture, with its anonymous, repetitive slabs and towers which disallowed personalisation and neglected intermediate (semi-private or public) spaces where social life could play out. Such environments denied diversity, quelled attempts at community-building, and engendered no sense of belonging, which led to them becoming depressing, dangerous places to dwell (Jacobs 1961; Young 1991).

Later research carried out on more diverse populations, often middle and upper-middle income people living in apartments by choice, showed far more favourable results, and indicated advantages to living higher up: more light, fresh air, views, peace and privacy (Mackintosh 1982; Kim 1997). As residential high-rises became increasingly normal, studies tailed off, but those that did exist found no evidence that living at height is problematic in itself. When residents struggled with this housing form, it was usually due to a lack of break-out social and green spaces, or due to overcrowding inside the unit. High indoor density is never ideal regardless of house form, but can have particularly negative effects in dense inner-city areas with higher residential density overall (Jacobs 1961; Charlton 2014).

Compact City principles promoting densification and the 'knitting together' of cities with activity nodes and corridors along public transport routes have been a driving force in post-apartheid development programmes (Todes 2003). Two recent documents commissioned by eThekwini Municipality, the City Density Strategy (2013) and Inner City LAP (2016) demonstrate their buy-in of these principles, but as broad brush spatial frameworks, they do not propose exactly how such densification might happen over time, or the anticipated roles of public and private sector actors in the process, or the kinds of mixed-use housing that could work in this context.

To this end, being able to work out an appropriate density for a specific site, and understanding how to apply it spatially, is considered very useful in planning new projects. It helps establish how much bulk should ideally be placed on a site and how it can be configured to maximise land use efficiency, while providing adequate private space for occupants along with enough semi-private and public space to bridge the two realms. In this regard, diversity of uses and people is critical.

Cities are full of strangers doing all kinds of things, and this mixing, organically and incrementally arrived at, brings about functional interdependence, a sort of urban solidarity that monofunctional buildings and massive developments simply cannot deliver (Jacobs 1961). A Verticolapa responds adeptly to the scale and form of its surrounds by including a mix of ground level uses to add local utility, activate street edges, and make thresholds permeable. Its residential windows always face outwards to provide the lights and the watchful eyes from above that make cities safer (ibid) and more welcoming. Designed in this way, a Verticolapa can in fact work as a means to optimise organic solidarity.

Past research suggests that residential high-rises can be sociofugal and discourage neighbouring (Gifford 2007). Busy urban environments are known to work against the formation of community, yet humans have a strong tendency to cluster. The benefits of forming NSTs and belonging to a larger social grouping are proven, so a Verticolapa has a duty to provide interstitial spaces where community can grow of its own accord.

It is important to accept that community means different things to different people, and urban areas need flexible spaces to accommodate ever-changing, overlapping social configurations that include residents, neighbours from other buildings, visiting family, friends, colleagues and even strangers. This reduces the risk of a block becoming an enclave that shelters only one kind of person and excludes all others. In today's city, diversity is inescapable.

A successful urban residential environment, I posit, furnishes each inhabitant with myriad opportunities to encounter dissimilar others, but with the choice as to who they interact with and how. The length of time spent living in a place has a bearing on this, and as tenure structures (owned versus rented) encourage different lengths of stay and appeal to different types of people, diversity is best supported by a mix of the two. Exactly what kind of diversity (socio-economic, racial, religious, age) will vary depending on context, but all available studies, including the one carried out in South Africa (Morris 1999) at a time when race and SES were all but interchangeable and prejudice held firm, suggest that diversity itself is seldom a problem in residential environments. Instead, conflict arises out of unjust systems and processes whereby people are treated differently or excluded, or where occupants behave inconsiderately, are intolerant of neighbours' lifestyle or culture, or worse, do things to harm or degrade the building.

Post-occupancy studies of MI housing in the US offer the most insight as to how multi-family dwellings, and especially high-rises, can cater for households of differing SES. Residential integration, researchers conclude, is aided by high quality buildings located in good neighbourhoods, and a mixing ratio that spans at least two adjacent income brackets and responds to localised housing needs. Residential integration is best achieved when groups are mixed evenly throughout the development, and cannot be distinguished by unit design (Brophy and Smith 1997).

A Personal Affair

Investigating high-density, highly unequal, multi-cultural inner-city environments requires humility, an openness to uncertainty, and a level of bravery, not least when it involves entering strangers' homes. For a socio-spatial enquiry, however, such immersion turned out to be indispensable, and produced a profoundly intimate research experience that could not have resulted from predetermined sampling or purely empirical enquiry.

The 101 individuals who contributed time, energy and ideas to this endeavour represented greater diversity than could ever have been pre-planned. Their stories became and will forever remain a part of my life, yet ultimately it is not their specific content that mattered as much as the effort made to ask, listen, record and interpret them. This work merely hints at the fascinating riches that lie in store for built environment designers who take the time to consult those who occupy the spaces they create. To this end, the single most important finding at the individual level of enquiry was that one's personal profile—gender, age, race, religion, self-identity—has very little to do with how satisfied one is living in a Beachfront high-rise. Regardless of where they were born, the kind of dwelling they grew up in, their level of education or what work they did, respondents all expected much the same from their housing: that it was safe, peaceful and comfortable enough for their needs.

Overall, participants were very satisfied with living conditions, and the few who weren't, clearly articulated their reasons. Most often, these related to neighbourhood factors such as feeling increasingly unsafe, a declining urban realm, or the nuisance and pollution caused by the informal and uncontrolled use of public space. Newcomers to the Beachfront were just as satisfied as those who had lived here for decades, and even when people planned to move away, it was seldom due to discontent but rather a change in life stage, or a pre-existing aspiration like owning a property (which they could not afford in this area) or having a garden.

Encouragingly, findings on residential satisfaction imply that the self-selection bias identified in the sample is unlikely to have affected research outcomes in any significant way. They point to a human commonality, suggesting that underrepresented populations, whether grouped by Nationality, SES, life stage or any other marker, are likely to have similar expectations of home to those interviewed for this study.

Unit/ed We Stand

At the spatial level of the unit, findings reveal how these buildings have adapted to transformation. As the only viable way to increase indoor floor area, balconies, almost without fail, had been enclosed.

Plan layouts, while generous, don't lend themselves to permanent subdivision to create more bedrooms in existing units, so owners wishing to upsize must either sell, or hope to secure a second adjacent unit. The dearth of larger flats on the Beachfront—those able to comfortably house five or more people—is a key finding. Yet rather than constructing 4-bed flats that risk standing empty if the market changes, a better strategy might be to build in flexibility by designing modular, interlocking unit plans which are easily conjoined by knocking through a party wall, and split again by bricking it up.

Lower-income renters were found to make use of all available space in bedrooms and living areas, in some cases using wardrobes or other furniture as privacy screens. In other cases, pop-up sleeping solutions let space fill different purposes at different times, while at the upper end of the market, owners were more likely to remove existing walls to improve the flow of the home or create open plan kitchen/dining/living areas.

Dissimilar dwelling patterns resulted in indoor densities ranging from 9m^2 to 175m^2/person, but the dataset's size made it possible to establish a workable range of indoor densities to inform new development in this context. In well-off blocks with original occupancy limits, space tended to be used inefficiently by today's standards, with some inhabitants enjoying far more than necessary and units standing empty for protracted periods. In contrast, some fully let South Beach blocks permitted up to five people in a bachelor flat which, multiplied over a whole building, means the (infra) structure had to carry double what it was designed for.

Although not a single respondent complained of feeling crowded in their flat, the spatial injustice in this situation is manifest. To address it, the Verticolapa will revisit occupancy limits to bring them in line with how locals live today. Rather than basing them on past ideals or number of rooms, they can be calculated according to a unit's floor area and provision of sanitary fittings, to encourage densities of between 15m^2 and 30m^2 per person, enforced at the lower end but flexible at the upper. One possibility is to classify children up to a certain age as 'half' people, acknowledging their reduced consumption of space and resources; another is to set different occupancy limits for different tenures or types of unit in a building. Mixing higher- and lower-income households, who naturally occupy space at different densities, in one building, is perhaps the simplest way to achieve a balance. For example, with four near-identical 2-bed flats, the market-rate owner-occupied unit may allow four people, the subsidised owned (FLISP) and market rental units five, and the rental social housing unit, six.

The multiple flat owners interviewed for this study all lived on the Beachfront and were open about how they managed their assets. A handful of renters who dealt directly with their landlords had good things to say, but these cases were far outnumbered by reports of the wrong kind of absent landlord—one who sees a flat purely for its exchange value, and is unconcerned with its use value. This has negatively impacted these buildings in two ways.

One such negative impact is the neglect and overcrowding of units which, as heard, is near impossible to control given the protection afforded owners by the Sectional Title Act. Another is the repeated buying, renovation, and reselling of flats, not to live in but to generate profit. Investment rentals and renovations for 'flipping' are typically done as cheaply as possible, without designers, and with expensive-looking materials that do not wear well. Coupled with owner-occupiers who have renovated their homes to be more liveable and sold them years later, this practice has produced a mishmash of flat interiors representing all styles of the last 70 years. Many of these units have been so brutally hacked they will never regain anything near their original architectural integrity. Moreover, construction work in a block of flats—or even one flat in a block—can render daily life unbearable for other inhabitants, whose homes, experientially, become building sites.

To address this, I propose two things with respect to the Verticolapa. The first is the creation of legislatory tools to limit the accrual and exchange of flats on the private property market. Placing restrictions on sectional title deeds, for example limiting the number of flats an individual or nuclear family can purchase in one building, and inserting a clause that no flat may stand empty for more than three months a year, will protect these spaces as homes by prioritising their use over their exchange value. The second proposal is that major renovations are prohibited in a Verticolapa. Owners and renters are welcome to modify their home at their expense with materials and components that are removable without damaging the structure, and on moving out or selling, must return the unit to its original condition.

Both these proposals would likely meet with resistance from wealthier locals, and require a shift in

mindset away from the flat as an object of decoration or status and towards its function as a container for objects, activities and memories. This would go a long way to protect the rights of less-resourced flat-dwellers, not to mention the buildings themselves.

Another pertinent finding at this level involves parking, which although spatially disconnected from a unit, has huge bearing on who seeks to dwell there.

Of all the aspects new developments must consider, parking is perhaps the most difficult to predict. At present, parking needs in the study area differ drastically in line with the SES of occupants in a block or neighbourhood, so for now, a good strategy is to gauge the ratios in surrounding buildings, look at the target demographic for the new development, and plan around that. Future high-rise blocks must find a middle road between the two extremes found in the study area—a building where nobody owns a car, and one where every household has two—in a way that avoids creating dead space by turning blank faces (solids) or spaces (voids) to the urban surrounds, and also allocates space equitably. Parking space in urban areas, I posit, should never be owned outright, allowed to accrue, or be exchanged.

Innovative, centralised management solutions will activate the use value of city parking space by tapping into things like timed-based sharing (of bays) and car-sharing. New developments must anticipate sweeping future change, for example a drastic reduction in car ownership, or road-based transport becoming redundant as water levels rise.

Staying at unit scale, experiential data is distilled into more recommendations for how the component cells of a Verticolapa might work. Views, this research confirms, have immense power to enhance the flat-dwelling experience, and can bring considerable psychological relief for those living in dense, busy urban areas or high indoor densities. This reinforces the case for making the upper levels of the city accessible to all. The paradox is that the higher one goes, the more exposed one is to the forces of nature.

This study confirms how destructive sea air is to buildings and their contents, and that the onshore breeze—excellent to ventilate units lower down and on calm days—is difficult to manage at higher levels and during storms, particularly when windows are old or inadequately designed. This affects the microclimate in Beachfront flats, where most original windows have been replaced by substandard alternatives, balconies enclosed, and fanlights sealed, so spaces no longer self-regulate as intended.

The new architecture of the Verticolapa responds to real-time climatic factors with façade modulation (overhangs, recesses, shading devices) and multi-variable openings that let the structure 'breathe' like a living organism. And like any healthy living thing, the host is well-equipped to expel what does not belong inside it: in this case, pests.

Experienced at unit scale, findings indicate that pests are only controllable by combined interventions at flat and building scale, so it is a designer's duty to ensure that the spaces of the home and service spaces such as passages, ducts and bin areas are easy to access and clean, though ongoing effort is still required from all users. Data also suggests that raising residential space up on pilotis, thereby minimising direct contact with the ground, could help in this regard.

Studying how the dwelling experience changes with vertical height, we find that different bands work for different lifestyles, stages, and personalities, which confirms again that a high-rise is well-equipped to accommodate a diverse set of occupants under one roof, perhaps more so than other housing form available.

With dwelling on the ground floor found to be problematic, it is recommended to only introduce residential space starting on the first or second floor. This supports the inclusion of lettable commercial spaces that integrate with the public realm at street level, bringing a mixed-use element to the Verticolapa.

In the new model, unit façades change according to how high off the ground they are, but also their solar orientation, which may sound like a prohibitive amount of design work, but in fact is quite easily achieved with modular systems and components that allow near-endless permutations within a standard structural grid. Today's Architects have technology to accurately map solar and heat patterns, and are able to intelligently respond to that information with design solutions. There is no justification for new buildings, especially housing, to adopt the bleak standardisation of the Modernists.

In unit planning, findings call for flexibility, and for layouts that maximise space efficiency without sacrificing privacy. Reintroducing open balconies; recognising the usefulness of the 'half' bedroom, and building it in; open-planning spaces; activating all indoor height; splitting bathrooms so sanitary fixtures can be used simultaneously; and designing spaces to fulfil more than one use at different times, are some of the ways in which this could happen.

A Verticolapa's units are fitted with climatic devices that are user-controlled, and materials and finishes that are non-toxic, long-lasting and eco-friendly, to result in light, airy spaces that support human health, productivity and wellbeing.

Building Bridges

At building scale, the goal is to fashion a container that provides a highly diverse resident body with a safe, comfortable and affordable home, as well as the option to have a garden, keep a pet, and

partake in community life—choices seldom available to urban flat-dwellers here.

The sheer variety of architectural styles, spatial and organisational forms found in the 51 buildings surveyed, meant there was always a lesson to be learned or some inspiration gained, whether for a detail, spatial arrangement or clever operating procedure. Findings confirm the importance of limiting the overall size of new developments so as not to 'rupture' the urban fabric (Sennett 2018). When a site's size coupled with its desired density means a need for more than 120 units, bulk should be broken up into distinct, interconnected wings of different heights and orientations to aid legibility, relate to the scale of the surrounds, and create interest and variety that lets residents identify with a manageable socio-spatial entity that forms part of a greater whole.

Building height is best derived from the interplay between site area, density, and context, and can be manipulated within a building or wing to capture views, permit vistas through or over the structure, and create a variety of rooftop spaces. When an infill site has structures of dissimilar height on different sides, a new building can moderate between them, its wings rising up or crouching down to 'converse' with neighbours. A Verticolapa has at least ten storeys above ground, including roof level, which is always activated either for common or private use, and no more than 21 storeys in total—the maximum reach of a standard Schindler goods lift, and also the height at which residential space starts to become psychologically disconnected from the city below. Fully engaging a building's vertical dimension by placing useful common areas with social and service functions at different positions and heights within the building ensures optimal use of city land, and creates visual dynamism by encouraging movement all around the structure.

Resident accounts of building condition and maintenance raised two considerations for new high-rises, the first of which is the importance of a robust, over-designed structural frame, infilled with good quality building materials and components that can withstand prolonged stress and, crucially, have guaranteed future supply chains. As such, a framed (column and beam) concrete structure with non-loadbearing masonry walls is recommended for the Verticolapa. Wider-than-usual (4.5m+) structural bays will allow inhabitable spaces to be used more flexibly to adapt to future needs, and they fit the width of two parking bays at, below, or above ground level. Protruding cantilevers and in-situ concrete shear walls that double as party walls, are two possible ways to maximise structural and material efficiency. The second consideration is the need for alternative energy sources, uninterrupted electricity to water pumps and at least one lift, and better emergency preparedness. Security, circulation and emergency escape systems must suffice for anticipated resident numbers (plus some), and continue operating through intermittent or prolonged infrastructural breakdown. To this end, investment in off-grid, energy-saving and waste-reducing systems is strongly recommended to limit reliance on municipal services and bolster resilience. The real risk of rising seas or floodwater rendering coastal buildings inaccessible makes a strong case for the inhabitable parts of such high-rises to be lifted well off the ground, the bases of lift shafts tanked, and the design of sacrificial parking basements that can be left to flood and bypassed by ramps or walkways so buildings can operate in post-disaster situations.

Flat-dwellers, this research confirms, must develop a specialised way of dwelling amidst many proximate others, and discover or invent mechanisms to negotiate differences in culture and lifestyle. Well-designed buildings make this decidedly easier, particularly when it comes to sounds and smells.

Some techniques to reduce the transmission of undesirable stimuli include the mirroring of unit plans, so that like functions share walls—also an efficient strategy to rationalise wet services around shared ducts—and treating party walls like external ones, so using fluted maxi-brick, double-skinned brickwork, or wider concrete blocks filled with insulation.

Vertical sound transmission is trickier to control. While carpets are the best floor finish for this, they were disliked by all but one interviewee for hygiene reasons, but also because a cool, smooth floor is appreciated in this climate. Tiles, especially ceramic ones, do not work well in this application as they amplify sound, and white or light-coloured floors are impractical as they require near-daily cleaning in marine environments. Raw, sealed concrete floors can be an economical and hardy yet elegant finish, but the clear winner here is timber. Findings suggest that, regardless of floor finish, occupant interventions are key to cordial neighbourly relations, for example using rugs or mats, applying felt stick-unders to furniture, leaving shoes at the door and walking barefoot inside, and considering the timing of domestic activities like housekeeping, which can be aurally intrusive.

To prevent smoke from drifting into neighbouring units, articulated façades—recessed balconies and entranceways—do help, as does a variety of user-operated opening sections at different heights, for example fanlights, sidelights and hinged small-pane windows that allow airflow to be directed.

Findings confirm that social interaction in Beachfront high-rises occurs mainly in common areas intended for circulation, mostly entrance lobbies and passages. Data suggests that neighbouring generally, and more specifically the formation of friendships and support networks, will benefit greatly if such spaces are designed to be pro-social.

A Verticolapa will have welcoming, step-free entrances and shaded seating that encourage loitering well into the evening; wide, modulated open passages where every doorway is distinct; varied breakout spaces, landings and places to meet informally in pairs or small groups; and routes that are enclosed enough to feel safe and screened for privacy or weather protection, yet open enough to connect visually with neighbours and the outside.

Elevators almost always proved socio-fugal, but staircases, both main and FE, were found to be a missed social opportunity, making a strong case for designing them as light, airy, pleasant spaces to encourage their use. Certain service areas, notably places for washing and drying clothes, also displayed embedded social potential. At present, most Beachfront households must have their own washing machine, so providing on-site laundromats will not only free up floor area in units and render the process more economical and eco-friendly, but provide a meeting point for residents and domestic workers alike.

Dedicated indoor and outdoor common areas where residents can 'spill out' to get some relief from the unit, meet other residents or host visitors, are all but absent in Beachfront blocks. Simply a function of architecture and lifestyles at the time these buildings were built, even spaces that do exist tend to be underutilised due to poor connection with units or strict rules. Asked what they would change about their living environment, many interviewees wished for social spaces. A Verticolapa responds to this by providing at least one indoor area large enough to host group activities (meetings, classes, clubs), private functions, and public events such as performances or lectures. Serving as social space for residents, the room or part thereof can be fitted out to cater for play, study or other activities.

As residents most often called for open green spaces, nature and vegetation should be integrated into the architecture wherever possible. Open balconies, however small, let residents bring nature into their homes, and facilitate the keeping of small pets—something a Verticolapa will encourage.

Gardens were at the top of many residents' wish lists, so new developments should aim to cultivate high quality landscaping that includes productive and ornamental gardens, and caters for leisure activities as diverse as reading and rock climbing.

Provision should be made for residents to get involved in gardening activities, which promotes skills transfer, intergenerational contact, and awareness of food security and the environment—all important considerations for future-proofing urban populations.

Findings also point to the value of including *all* residents, not just property owners, in decision-making around their collective home. This helps flat-dwellers develop a sense of belonging (to place and community) and fosters the pursuit of common goals, collaboration and resource sharing, leading to a more sustainable, resilient and equitable living environment all round.

Everybody needs good neighbours

At the final scale, that of the neighbourhood, findings echo more closely the individual enquiry than either of the two intermediate scales. In a way, a block of flats acts at once as a filter, a connector, and a translator between the smallest and largest spatial scales, between city-dweller and city.

The seaside location, while seldom the main reason for moving here, was shown to benefit residents greatly through access to high quality public space and nature, increased sociability, fitness, community ties, and QoL. The tourists it attracts are economically and socially desirable, but the seasonal influx of local holidaymakers proved problematic for many residents whose homes, experientially, become holiday resorts subject to peak crowds and unregulated semi-formal activities.

In one way, the democratisation of this public space, and even the integration occurring in residential environments here, is a shining example of progress and transformation, but in an area like North Beach, there are signs that stark economic disparity between residents and holidaymakers can reinforce residual racist sentiments and amplify difference. In convenience terms, the opposite is true: the study area proved so well-connected by private car and public transport that a group of respondents were found to happily mix the two, using hybrid ways to get around—something that is very unusual in South Africa. This not only has an equalising effect, but bodes well for integrated mobility in future urban developments.

A building's immediate context was found to exert the strongest influence on the experience of dwelling in an urban high-rise, and as such, must inform new development. The height and form of surrounding buildings, their density of occupation and the socio-economic profiles of those living in and around them, will not only influence building form, function and architectural expression, but also guide other strategic parameters: a reasonable target residential density, a parking factor that is workable for the likely residents, the balance between owned and rental units and subsidised/market rate units, the size and spread of flats, and their occupancy limits.

A site's precise location with respect to safety, cleanliness and proximity to the sea and adequate facilities, will further affect the economics of construction, from securing diversified funding sources to setting budgets and price points that align with local land values and community aspirations, right down to details like which fittings are most practical for the interiors. Similarly, interventions to integrate a new building with its surrounds or to mitigate city sounds must react to localised activities, movement of

vehicles and pedestrians, and the way nearby amenities and services are presently used—which requires thorough research before any design is undertaken. Much the same applies to problems in the Beachfront's urban realm, all of which fall loosely under the banner of 'crime, grime and urban decay'. A sound understanding of these issues, their causes and implications for local residents, is key to designing responsive new residential environments.

Of particular relevance to the discussion around spatial justice and housing is homelessness, and the extent to which new development can or should play a role in addressing it. A question that comes to mind is 'How poor is *too* poor to qualify as a member of a community or neighbourhood?', but the findings of this study confirm that abject poverty is not always the reason people end up on the streets. It is perhaps acceptable to be of low socio-economic standing, but not to be homeless, which says something about our social fabric and the limits of formal housing—high-rise or not—to encompass all urban dwellers.

Perhaps the most valuable learning at this scale is the importance of the relationship between building and street. Buildings in fenced compounds that are set well back from the street not only disconnect residents from the neighbourhood but create dead zones in the public realm that present opportunities for crime. Even small setbacks such as perimeter gardens are difficult to manage in this context, as they invite unwanted uses and can pose an added safety risk. For this reason they tend to be enclosed, turning them into buffer zones that separate residents rather than thresholds that soften the public/private transition.

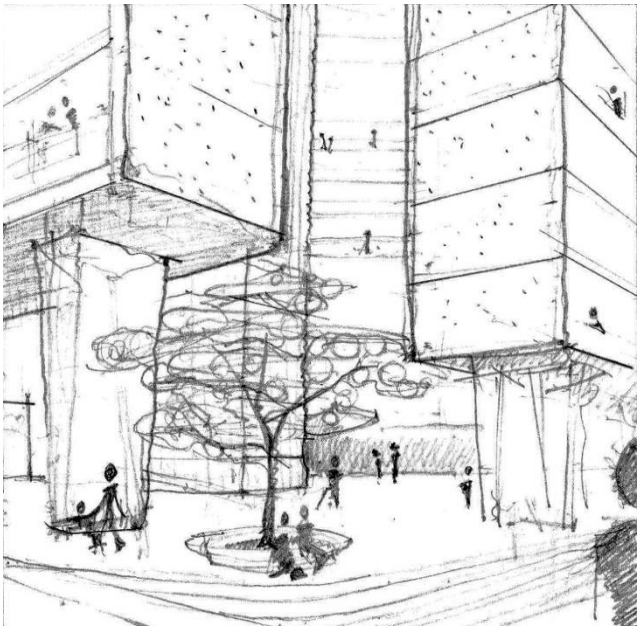


Fig. 178: Visual permeability of public and semi-private space

There is strong justification for new buildings to extend right to boundary edges and address the street wherever possible with commercial functions that bring added utility to the neighbourhood. Large overhangs or canopies that obscure the pavement from residents above are best avoided, and where buildings are set slightly back or lifted up on a street frontage, the leftover space beside and under the structure is better treated as an extension of public space. If non-residents are able, even encouraged, to use a site as a thoroughfare, meeting point or destination for goods or services, it is more likely to be favourably received. Such integration renders a building socio-economically sustainable, and gives it potential to act like a beacon in the neighbourhood, a welcoming place where there is a 24-hour light on, and that feels looked-after, inclusive, and safe.

This research suggests that a building with a distinct collective identity that contributes in some way to a neighbourhood is less vulnerable to criminal elements, and this can translate to those who reside there. Spatially, a building can contribute more directly by offering indoor or outdoor spaces that can be used or rented by non-residents, and house socially-focused uses, say for NPO offices, education or training facilities, or a community-run canteen serving affordable meals made with local produce. Once they recognise the opportunities embedded in any site, designers are limited only by imagination.

A Verticolapa responds to and builds on what is good in a neighbourhood, and seeks to include the things that are missing or underprovided.

I want to be a super model

By way of final recommendations, the coming pages contain design guidelines for the model Verticolapa. Its parameters are derived from a rigorous enquiry into the urban residential high-rise—as an instrument of spatial justice, a building typology and collective home--and what in architectural terms equates to 101 in-depth post-occupancy evaluations. Having accepted a relational understanding of the world in which the meaning, composition, and value of life emerges only in relation, we must ask: 'Can a model in fact *be* relational?' I believe it can, if built into it is a constant evolution, and following the insights of this research, it needs to be.

At each spatial level, I identified characteristics that delivered better outcomes in terms of satisfaction, sociability and sustainability, and have strung these together in a sequence framed around the development process as it occurs locally. Like Alexander's (1977) patterns, the guidelines are intended to be easily understood by anyone regardless of their level of expertise or role in the development process, whether they are a proactive investor looking to fund new innovations, a municipal official tasked with developing a contested site, or someone interested in learning about or living in a building that better complements their self-image and their approach to others, and illuminates the world around them.

Part II: Recommendations

Design Guidelines for THE VERTICOLAPA

A model for integrated high-rise urban living

DEVELOPMENT process & parameters

1 Participatory design process

As an agent of spatial justice whose primary goal is to provide inclusive, sustainable living environments that support urban flourishing, a Verticolapa is designed and developed together with all stakeholders—owners, tenants, staff and visitors—who will use the building as a place to live, work, shop or play, as well as neighbourhood residents, officials and politicians responsible for the site and surrounds. Recommended at the outset is a co-design workshop of 60 to 120pax, hosted near the site. Professionally facilitated with mixed, changing groups that carry out a series of creative tasks, the 6-8-hour event works through the past, the present and some possible future visions for the site. Participants include officials from City line departments, built environment professionals and students, and outputs include multiple tangible 3D user-generated solutions to guide the design team. The same stakeholders are invited to a second, shorter workshop where the concept design is presented back, after initial client approval but before it is developed for council submission, and invited to critique it, raise issues, and propose changes.

2 The intermediary collective client

The 'co' in Verticolapa refers to the collective body or organisation that commissions, takes part in the design and development of, and ultimately lives in and manages the high-rise. A group has more power in terms of bargaining, access to credit and skills, and activating economy of scale. Two recognised organisational forms that demonstrate this are community-led housing co-operatives, and ethical non-profit housing associations. While a collective may grow to operate across multiple sites, it is important that most or all of their members dwell in the buildings they run. Registered as a non-profit housing provider, a collective might decide to allocate 10% of units as rental social housing and/or 30% to FLISP homebuyers, and would apply for the relevant subsidies and manage sales and tenanting. They will also manage the rental income from flats and commercial spaces, to be reinvested back into building maintenance, operations and growth.

3 The 51/49% principle

As well as the option to rent a flat from the collective, all Verticolapas support home ownership to an extent, ideally offering market rate sectional title units to be bought outright by anyone (who will then join the collective), as well as subsidised and tiered purchase options available to qualifying members. The control of the building must always rest with the collective, so no more than 49% of the asset's ownership should ever pass into private hands, whether those of individuals, families or companies. To prevent housing being exploited for profiteering, restrictions need to be placed on private entities who purchase a flat in a Verticolapa. No more than one unit may be owned by an individual or nuclear family, and it must be lived in by the owner or a relative for at least 9 months of the year. This will prevent the accrual of shares (and decision-making power) by the private sector, prevent flats from standing empty, and reduce the negative impact of high turnover and overcrowding associated with unmanaged short-term lets.

4 Tenure mix

Blocks of flats occupied by a mix of homeowners and longer-term tenants are the most socio-economically sustainable. Homeowners provide stability, continuity, and lay the basis for a 'block culture'. Renting is more accessible, lends diversity to residential environments, and is attractive to lower income households seeking convenient subsidised lodgings, mobile populations (students, professionals) and higher-income individuals and families who choose to rent because of the freedom it affords. Mixed tenure blocks where owner-occupiers live beside those who rent from the collective are less vulnerable to market flux, and more likely to maintain both the building and their solvency.

BUILDING DESIGN

5 The development's identity

Name the development early in the process. Choose something that has meaning to locals, was suggested in the co-design workshop, or derives from site context or character. This will aid the project team and the public to think of it as a living, growing organism, a collective home rather than just another anonymous object or pile of building materials. The name forms the basis of a graphic identity that includes a font to be used for signage, perhaps a colour scheme, and even a logo to be used on block communications.

6 Building form

Depending on location, a Verticolapa aims to achieve a net residential density of between 300 and 600 du/ha. The model is scalable upwards from 80 units, the estimated minimum number of flats needed to make high-rise construction feasible. It is important to limit the physical bulk of any one built structure, so for bigger developments, break the form up into wings, blocks or towers, each housing at least 60, but no more than 120 units. Each structure should rise at least ten storeys above ground, including the roof level, which can serve as a garden, laundry area, or penthouse. At the upper end, limit building heights to 21 storeys including basement and roof levels. For security and social cohesion, the most desirable situation is for residents to see others while accessing their flats. Here the doughnut typology is ideal, with units facing out in all directions accessed via internal passages, but it does not suit many sites. An open Letter typology with internal access passages facing

each other over a distance from 10m to 30m, a J, H or C for example, work best. Letters can comprise a continuous floor plate or multiple detached wings, one or more of which may rotate relative to the boundary or another wing to capture sun or outlooks, or create interesting spatial conditions. The placement of parts of differing height and proportion responds to movement towards, away from and through, and views into and out of the site. All parts connect via sheltered open walkways at every level, to a central circulation core housing the lifts and main staircase.

7 Unit size and distribution

The nuclear family is not the most common household structure in South Africa and new housing needs to cater for single-parent, extended, intergenerational and composite families, as well as adapt to growing or shrinking households. The greater the variety of flats on offer in a building, the greater the diversity of its residents. Importantly, there should be no way to discern from outside which units are which, for example rental social housing or upmarket owner-occupied, and different units are best mixed in every part of a building, ideally on every floor, rather than grouped together. Unit sizes should reflect localised housing needs. Lower down, large units work well for families and small ones for pensioners, while students, professionals and luxury units are more suited to higher levels. Allow for some adjacent units (of different sizes but the same tenure type) to be conjoined.

8 Parking provision and design

A Verticolapa promotes multi-modal mobility and reduced car dependency. Proximity to and inclusion on existing public transport routes will help make viable the growth of a safe, reliable network, and bicycle racks, well-lit walkable paths and rest nodes in new developments will encourage non-motorised ways of getting around. Car ownership remains high, so parking provision must aim to satisfy today's needs and at the same time anticipate future change. Provide as many bays as the site will take without compromising ground-floor thresholds: one bay for every owned unit and the remainder for tenant use. Crucially, all parking in a Verticolapa remains the property of the collective, who manage it to ensure fair allocation and help co-ordinate sharing arrangements. Bays are either reserved for exclusive use by a particular unit or rented by tenants on a waitlist basis, which prevents the exchange and accrual of bays, and means parking space can be adapted or repurposed as future needs dictate. Basement parking should be designed to be sacrificial so the building can continue operating in the event of long-term flooding. This implies robust waterproof tanking to the base of the lift core, and ramps to permit ongoing service and pedestrian access.

NON-RESIDENTIAL USES

9 Commerce

A building's anchor tenant, an established primary use business, can be relied on to always pay rent as they are less affected by market ebb and flow. A chain supermarket is first prize, but a pharmacy or similar can also work. Scale the space according to building size, anywhere from 150m^2 to 1500m^2, and let it operate independently of the residential component. This brings non-residents to the site. Secondary uses include smaller businesses that favour ground-floor spaces of 30-150m^2, like a hair salon or bakery. Micro businesses like a locksmith or florist can trade in spaces as small as 6m^2 and add value for residents. 'Clean' commercial functions such as offices and consulting rooms mix well with residential use, and create further possibilities for timesharing, for example parking bays or a boardroom. Such space attracts higher rents and can raise the profile of a mixed-use building.

10 Dining, drinking & leisure

Restaurant kitchens tend to be noisy and smelly, and fast-food outlets even more so. If included, provide adequately sized and ventilated kitchens that open onto a service yard situated to minimise disturbance to residents. Venues serving hot and cold beverages are popular gathering places for people of all ages, and mix well with residential uses. A venue where alcoholic beverages are the primary offering is likely to clash with residential use. It is recommended to avoid businesses with a nightclub license, and if they do come in as tenants, to nurture an open relationship with proprietors to ensure that both venue and patrons are managed in a way that works for all.

11 Public and community space

A Verticolapa cedes at least a small piece of ground for public use. People are attracted to activity, and passers-by are more likely to linger if there is inviting, sheltered seating, such as a forecourt with a bench or a shade tree. This integrates a building spatially with the surrounds, creating opportunities for new social encounters. The effect is magnified by including a socially-focused amenity for public use: a post box, recycling bank or multi-purpose room where a dance class or support group can take place. Where youth facilities are lacking, a building might contain a crèche, homework centre or digital resource hub. A large development might include a supervised play area or swimming pool that is open to neighbourhood children for a small fee. Planned and aligned with the municipality, such spaces could even attract subsidy for a lifeguard or social worker. A good way to build social capital is by hosting building-based events. Residents might organise a monthly brunch, book club, or bring & braai day. Events that are open to outsiders might include indoor or outdoor film nights, exhibitions, performances, markets or walking tours.

BUILDING CONSTRUCTION & SERVICES

12 Building envelope

A Verticolapa's structural and architectural concepts are developed in parallel to maximise tectonics and efficiency. Aim for a robust concrete framed structure with few loadbearing walls, and bays that are at least 4.5m wide. Allow for at least 3m-storey heights (4m at ground level) to enable future conversion. Off-shutter concrete can be left exposed for columns, beams, ceilings and shear walls, and colour additives such as red oxide will add a rich hue. In-situ reinforced

concrete slabs are well-suited to high-rise applications, as the poured material can be reinforced as needed, take on any shape, and can be modified (e.g. punctured) at a later date. Aggregate can be specified according to a slab's required strength and partly substituted with recycled or lightweight materials. With good sound and thermal insulation properties, a concrete floor is a suitable substrate for all finishes and can be attractive on its own—raw, tinted, textured or ground down and sealed. Non-loadbearing walls must perform well in terms of sound insulation, yet be as light as possible to reduce self-weight (for which large format hollow masonry is best), either air-dried concrete blocks or fluted fired clay maxi-bricks. Concrete blocks are cheaper and easier to produce, less water-absorbent and stronger in compression, but have a 100-year lifespan. They lend themselves to being painted and clad and it is easy to procure 'specials' like face blocks or unusual shapes. Clay bricks are recyclable, last up to ten times longer, and suit face applications and marine environments, especially when pre-sealed or glazed. They do cost more, and hollow bricks are uncommon in SA, so it would be necessary to work with brickmakers to ensure large batches and future availability. The model has metric standard wall thicknesses: 200mm for external walls and 100mm or 150mm for internals.

13 Openings

The doors and windows in a Verticolapa belong to a modular family of standardised, interchangeable components that are produced in bulk to invoke economy of scale, and which can be easily reproduced later if manufacture is discontinued. In principle, door frames and external doors (solid, glazed or hybrid) are of renewable hardwood, finished with penetrating sealant. Door openings are 900mm (exterior) or 800mm (interior) wide, and either 2400 or 2700mm high to accommodate glazed bottom-hinged fanlights 300 or 600mm high. All doors are fitted with rigid stays to prevent slamming. Front doors are standard framed timber, either solid or stable type, with a glazed, coloured or patterned inset panel that is customisable according to user preferences or a building wayfinding strategy. Flat numbers comprise individual numerals that affix to the door leaf and are detachable and reusable. A high-rise building's windows are its 'eyes' to the outside world, and their type and configuration define its personality. Each Verticolapa has a custom menu of windows available from approved suppliers in different proportions and sizes, from which those replacing flat windows can choose. Windows comprise smaller panes of roughly 2:3 proportion and averaging 300mm wide x 450mm high, grouped together to form rectangles that fit various openings, not unlike industrial types. Individual panes are either fixed, or open on hinges (top or side) or a central pivot (horizontal or vertical), permitting a host of functional variations to capture and direct wind and exhaust hot air from units. In this context, the two most suitable window materials are renewable hardwood treated with a penetrating sealant (not varnish which performs poorly in humid climates) and steel that is galvanised, primed and painted. Frames require regular cleaning and re-treatment every five years, and mechanisms, including restrictors to counter high winds, regular oiling. Screens and balustrades are primarily a safety feature, so as a rule, the closer to the ground they are, the more open they should be and the higher up, the more solid. At low levels, visibility through a balustrade lets residents chat to passers-by or watch children play, but above the 8th floor will likely induce vertigo. Hybrid solutions include a solid masonry balustrade wall with a breeze block insert, or a half-height masonry wall topped with a steel balustrade up to the required 1m height. External fixed screens made of breezeblocks or recycled timber are recommended for open passages and skywalks on higher levels to increase the sense of enclosure, and a chunky (dia. 60-90mm) continuous timber or tubular steel handrail for added peace of mind. Operable screens such as sliding or hinged timber shutters and canvas roller awnings work well to protect balconies and unit façades when their mechanisms are robust.

14 Services

New developments need to diversify power sources and anticipate a future with 100% clean energy. In tall buildings, solar rooftop installations are best placed to take advantage of the sun. Evacuated solar tubes are most efficient for bulk water heating and can be supplemented with panels and batteries. Verticolapa units have prepaid electricity meters so occupants can monitor usage and expenditure, and B-class certified energy efficient geysers sized relatively but no larger than 200 litres. Lighting in common areas is fitted with energy-saving bulbs and low-light sensors, and security lighting uses movement sensors. The law now requires a generator be installed adjacent to the transformer room of new high-rises to power common area lighting and access systems, pump water tanks, and run a single elevator during blackouts. The building's water is also managed sustainably: each flat has a water meter, so households are aware of and pay only for what they consume, plus a small share of common water. This is fairer and simpler than existing processes, empowers residents, and allows a flat's water supply to be temporarily switched off for repairs. Toilets flush on 6 litres of water or less, ideally on a dual 4.5/3 litre system. Rainwater harvested from all viable roof surfaces is collected in tanks and used for irrigation and cleaning. For connectivity, all units come fitted with fibre optic internet so occupants can select a provider and package to suit. Alternatively, they can subscribe to wireless broadband networks like Rain or 5G that require no infrastructure, or for light usage or tight budgets, connect to the free WiFi in common areas.

ACCESS & CIRCULATION

15 Entrance

The foyer should have an expressive entrance canopy for legibility and to shelter those arriving. It should house a proper reception desk and be lit and manned 24/7—as much for identity and round-the-clock facility as for safety. A supervisor's office opening off the space affords an overview of activities. Recommended fixtures are a phone-linked (cellular) intercom system, private post boxes with a larger one for parcels, and a noticeboard (best hung near the lift waiting area). A feature wall of ceramics, artwork, plants, or a water feature will liven up a foyer,

as will a view through. Seating, fixed or mobile, caters for waiting or resting residents or visitors, and can spill out onto a shaded gathering place. Then, in pursuit of spatial justice, we need to imagine beyond the types of security that limit our freedom of action and association, but at the same time, recognise that the layered security currently found in these blocks responds to a very real fear of crime (as distinct from crime itself) and cannot simply be dismantled. So while most of a Verticolapa's security needs are anticipated to be met passively through building design, they are expected, for now, to be supplemented by active human surveillance. Coded access discs are a good way for residents to enter on foot, swiping through one or two glass doors, and when there is a single pedestrian access point through which everyone must pass, wall-mounted door release buttons inside the secure zone(s) will suffice to let people exit. If needed, CCTV, monitored from reception and recorded, works to cover unmanned access points like a parking entrance or service yard, and other common areas if required.

16 Vertical circulation

A Verticolapa has at least two elevators: one for passengers and one that also takes goods. A service lift is necessary in a block of flats to accommodate residents moving furniture in and out, construction workers and their gear, medics with a stretcher, or bulky items like surfboards. One passenger lift serves between 50 and 60 units, so use this to guide the overall development size (100-120 units, 150-180 units etc.). Lifts should stop on every floor and are best clustered into a centralised self-supporting vertical core, ideally detached from the inhabited block(s) with no more than a 50m walk to any unit. Inside a passenger lift, a mirror wall works well, and one glass side that permits views in and out is a novel prosocial feature if budget permits. Intelligent lift control systems work well to save energy and restrict access to certain levels like basements or penthouses. A Verticolapa's main stairwell is more than just a utilitarian way to circulate vertically. A generous staircase that wraps around the bank of elevators or pulls off to one side to claim its own window walls—a space with natural light, fresh air, plants, views and rest places set back from the movement path—will invite more frequent use. Staircases should be constructed in concrete, receive hard-wearing finishes like terrazzo or industrial vinyl, and be fitted with non-slip stair nosings and sturdy continuous handrails. Treads can be pulled away from sides and centre to enhance visibility between floors. Inside duplex units, open timber stairs are recommended.

17 Horizontal circulation

The access passages and walkways in a Verticolapa branch out from the lift core to form a network that feeds all its parts. As shared, uninhabited spaces, they should always remain partly open for ventilation and receive hardy, seamless floor coatings like *stoep* paint or epoxy that are easy to clean and drain. A range of colours can augment aesthetics and wayfinding. As the places where most informal social interactions take place, passages should be at least 1.2m wide and can 'pop put' in strategic places to create small, protected break-out areas where neighbours can chat, or kids play without straying far. Chamfered inner corners at passage junctions and beside fire escape stairs are good locations for such sky plazas.

18 Means of escape

By its nature, a Verticolapa is fire resistant. It is built of non-synthetic, non-combustible or fire resistant materials, designed with open-air circulation and intra-building visibility, and occupied by a proactive, co-operative resident body. The back-up generator for common lighting and the subsidised provision of portable solar lamps reduces the need for open flames when the power goes out. This is in addition to the usual high-rise fire safety provisions: FE stairs no more than 40m from a unit's entrance, wall-mounted extinguishers and hose reels at regular intervals along passages, and photo-luminescent emergency lighting along escape routes to exits. An illustrated emergency response plan is displayed on every level, and each floor has a volunteer safety officer to act as a marshal. With no smoke detectors or alarms, residents are best placed to discover a fire, alert others, facilitate evacuation and make sure no-one is left behind. Drills take place without warning at least once a year.

COMMON AREAS

19 Semi-private spaces

Shared spaces and facilities can greatly improve QoL for flat-dwellers in high densities. A Verticolapa seeks to instil pride in common property and create an environment where all feel comfortable using shared facilities without fear of embarrassment or conflict. Be clear about how equipment and spaces are intended to be used and the expected etiquette. Charging a small fee to use items reinforces their value, and contraventions like leaving a mess might attract fines, or invoke 'community service' hours. Residents are encouraged to propose ideas to improve common areas and take charge of their initiatives. In a block of flats, semi-formal common areas—structured space not programmed for a specific use or activity—can add great value. A simple feature like a table or chalkboard wall can designate this as a place for relaxing alone or in a group. Such spaces can range from a tiny courtyard where smokers congregate, to a void on an upper level where a flat would otherwise be, where teens do homework or adults share a meal. This takes strain off individual units and creates opportunity for those who live alone to venture safely out and meet neighbours. Aim to provide one such space every few floors and let them naturally assume different characters, for example a 'quiet zone' suited to meditation or study.

20 Indoor areas

A Verticolapa has at least one multi-purpose space suitable for larger group gatherings. Free of charge for building-based uses, it can be hired out at cut rates to residents for private functions or at market rates to groups or instructors hosting activities. The room should be in scale with the development, typically between 60 and 120m^2. It should open onto an outdoor area, and if possible include a kitchenette and serving hatch. An accessible unisex toilet must be located

nearby. Large blocks might have tailored activity rooms such as a TV lounge, interfaith prayer room, indoor gym or soundproof music studio. The sharing economy reduces consumption and duplication by enabling people to borrow or rent things rather than buying them, and building-based libraries can loan not only books for all ages but also a variety of children's toys. They can also rent out sports equipment, outdoor gear or power tools at affordable rates, but it is good practice to ask for deposits. An ideal future scenario would see every Verticolapa owning a fleet of hire bicycles and making two or more on-site bays available for car-sharing vehicles.

21 Play areas

Recognising the need for play areas in high-density housing, a Verticolapa supports diverse play for all ages. Babies and toddlers should not have to leave site to play outdoors, for which a sandpit, patch of grass and a slide is a good start, plus shaded seating for carers. Indoors, play mats, cushions and bright colours suit these users. Older children (6-12) and their play equipment take up more space, so provide as much as possible. Swings and climbing apparatus, especially the adventure type, are popular with this group. Features like a climbing wall or suspended 'nest' hideaway can be integrated with the building. Include natural features such as a climbable tree, fishpond, or secret garden. Indoor games rooms are good for activities like boardgames or jigsaw puzzles that are restricted in a flat, and larger games rooms may have a *foosball* machine or pool table.

22 Gardens

The Verticolapa is a multi-tiered ecosystem that hosts everything from grasses, herbs, vegetables and flowers to shrubs and trees, spread throughout the structure in different size spaces at different levels. Green roofs that carry between 300 and 900mm of soil for direct planting must be well-drained and easy to maintain. A 'green wall'—a drip-irrigated vertical garden fixed to a façade or suspended from a slab—is another possibility. Open balconies mean every resident can have their own potted garden. Landscaping is overseen by a full-time gardener who is employed by the collective and lives on site, but residents are encouraged to assist, and to propose and contribute to new projects. Defined at design stage by a Landscape Architect, common gardens are best located in internal open spaces or on sunnier upper levels, safe from unsavoury public use. Water-wise indigenous plants like succulents and perennials are recommended, and movable box planters make affordable vessels for all types of vegetation—even small trees, if the structure can take their load. Edible landscapes are always encouraged. Herbs and leafy vegetables are easily grown in small spaces, while larger produce, root and row crops suit allotment-style patches that can be tended by individuals or groups of residents. Gardens that serve other purposes, whether educational, medicinal or purely ornamental, can become sensory oases for city-dwellers.

23 Braai areas

South Africans love cooking outdoors, so although barbequing is best suited to open spaces and low-density suburbs, it is worth the effort to accommodate this activity in a block of flats. Common use braai areas must be carefully located, designed, and managed. A roof terrace is ideal, but stands should be far from washing lines (smell) and flammable objects (fire). Screened, built-in brick and concrete stands are most practical, clustered together or dotted around to create spaces for different groups. Another option is to provide sheltered braai stations where residents can bring their own portable braais, but expectations around the cleaning of areas and moving around of equipment must be explicit. Where popular, a booking system can be introduced.

24 Utility areas

A Verticolapa has an on-site laundry room with heavy-duty, coin-operated washing machines and at least one tumble dryer. The well-ventilated room needs a folding area and space for queuing laundry but not much else, so it can be in a basement. Try however to minimise distance from drying lines, so a room on the top floor or roof is ideal. Drying lines should be strong, laterally protected from wind, and numbered so their use can be regulated if need be. Laundry etiquette is to be communicated to both residents and domestic workers. Other utility spaces such as a workshop where building-related maintenance and repairs are carried out can be opened for resident use. Having a space to work on anything from a science project to a broken chair brings one of the benefits of living in a house to the city, and promotes inter-generational contact and skills transfer. Another such benefit is space to store things, and blocks can further bridge the gap for flat-dwellers, who take up less space in cities and tend to be more mobile than house-dwellers, by providing secure, dry overflow space near the unit for storing bulky, lesser-used items. Each floor of a building needs at least one lockable resident storage room with easy access in front for frequent use items (a bicycle or pram) and shelves and hooks further back for things that are used seasonally or infrequently. If preferred, individual lockable cages can be installed inside the room. Large blocks may offer basement storage cages for rent, but they are not to be co-opted for long-term private use.

UNIT DESIGN

GENERAL

25 Occupancy limits

In a Verticolapa, occupancy limits are set in response to how local people prefer to live. Here, to cater for growing families with babies and small children (who consume less space and resources), a Verticolapa has a new occupancy category: a 'half person', that applies to anyone under 6 years old. Counted this way, a unit's floor area divided by the maximum number of occupants results in an indoor density of between 15 and 30m^2/person. Enforced only at the lower end to prevent overcrowding, this leaves room for those who can afford it to occupy more space.

26 An interesting outlook

It doesn't really matter what people see from their flat, as long as there are living things (people, nature) to

connect them visually and psychologically with the outside world. People-watching is much-loved, so in urban environments, those living on lower levels automatically provide the 'eyes on the street' and 'lights on at night' that keep cities safe. At the other extreme, a distant view, especially of nature, can be immensely therapeutic. Notably, huge panes of glass are less effective at framing views than smaller ones that are carefully placed and proportioned. Large windows, particularly aluminium sliders, are difficult to clean, deteriorate quickly, and provide little weather protection, so rather position smaller linear windows where people will spend time in the home—cooking, seated in the lounge or reclining in bed.

27 Open balconies

Every flat in a Verticolapa has an open balcony sized relative to its floor area and recessed into the building footprint, so covered by the slab above. They are not designed to be enclosed. Even an outdoor space as small as 2m x 1m will suffice to grow plants or sunbathe. Unusual plan shapes, rather than a problem, are a playful addition, and more than one room opening onto a balcony improves the flow of the home. In duplex units, double-volume balconies work well, and side privacy screens between units are fine to be lightweight, coloured or textured, but should be fully opaque.

28 Conjoined and duplex units

Flexibility is important to ensure resilience and long-term sustainability in any building, and a Verticolapa can be occupied in various ways and adapted to future needs. The model's modular design consists of four adjacent structural bays clustered together and repeated. A cluster may be single- or double-storey, and contains interlocking units that can be arranged in near-infinite permutations. For example, a cluster could have four small units on one floor, or two small, a medium and a large unit over two floors. A 1m wall panel in the same place either side of each cluster, is designed to be broken through to conjoin adjacent units. For example, joining a 3-bed with a 1-bed unit results in a 5-bed, 3-bath unit that will house a family of ten on one level. Duplexes are less space-efficient, but perform better climatically, and when floorplates are cut back to create double volumes and activate mezzanine spaces, they can feel quite luxurious.

29 Responding to height

For security, privacy and peace, **ground-floor flats** are best avoided. If included, they should face inwards to a protected area, and if street-facing, be raised half a level, set back from the pavement with a passive buffer, and all openings protected with sturdy, climb-proof burglar bars embedded in walls or balcony surrounds. **Low level flats** (floors 1 to 3) must respond to what goes on just outside the building, so in busy areas, inward-facing bedrooms work best. Provide a full range of unit sizes (zero to 3-bed) with option to conjoin, to cater for families with young children and small households with mobility-impaired occupants. At this height, all openings still need securing. Semi-permeable balustrades let occupants connect with outside activities, but open panels might not extend all the way down. Cater for households with small occupants by including stable doors so the bottom leaf can stay closed, or removable half-height timber barriers to block stairs or exits. Maximise provision of **mid-level flats** (floors 4 to 8) as they suit the most occupants. Again, provide a full range of unit sizes (zero to 3-bed) to accommodate a mix of users, including families. At this height, burglar guards are not required on exterior openings, but strong wind and rain is a factor. From here up, opening windows need rigid restrictors to prevent them slamming or being ripped off hinges, and the same for doors and fanlights. For balconies, sliding screens or canvas roll- or tilt-up awnings that are openable in fine weather, work in this band. Mechanisms should be durable like sailboat fixings and require regular cleaning and greasing. **High-level flats** (floors 9 to 13) offer great views and peace to able-bodied residents. Provide a range of smaller units (zero to 2-bed) to house student and professional flat shares, working singles, couples and smaller families with older children. At this height, rigid fixed screens of timber or breezeblocks are best to protect balconies from strong wind. Up here, reduce the number of opening panes on the façade and aim to capture air via intermediate spaces. Try to include flexible workspace such as a sleeping recess that doubles as a home office. Floating high above the city, **sky-level flats** (floor 14 upwards) suit similar occupants to high-level ones, plus those travelling for leisure or work. The great views and seclusion they offer are most appreciated by outsiders and will attract premium rates for short-term stays, so it is recommended to reserve a few units in this band to generate income for the block. It is fine to permit limited short-term lets of privately-owned flats up here, say if an owner goes away for a few months, if this is managed by the collective, not an agent or booking website. Design criteria match the band below and must anticipate gale force winds, and top floor ceilings need good insulation. When a Verticolapa has **penthouses**, they match the rest of the building. Footprints can be set back and façades articulated differently, but they employ the same materials and architectural language and avoid fragile, lightweight elements like clip-on awnings. Wind screens are best made of heavy materials used in permeable ways, so breezeblock or brick lattice walls, and built-in outdoor furniture and planters can double as safety barriers. Bring the elevator up to this level and consider multiple units that maximise views and functionality.

30 Responding to orientation

Here, **east-facing units** pose a design dilemma: we seek to open up to sought-after sea views, leaving flats exposed to salt-laden onshore winds and low angle morning sun that heats up spaces. To address this, glazing is best recessed as far as possible from slab edges, and window sizes reduced. External louvred shutters are recommended for windows that are right on the façade, especially in bedrooms. Fixed with parliament hinges and leaving room for windows to be left ajar at night, shutters must be able to be opened, closed, latched and wiped from inside. Balcony windows can receive an extra layer to filter, dapple or exclude rays, for example a creeper-covered lattice or weighted outdoor curtain. Here, the ideal aspect for living spaces is **North**, so aim to maximise the provision of flats oriented within 45° of

this. In this orientation, the sun travels on a predictable arc, so can be excluded at certain times of day/year and let in at others by means of recessed glazing, horizontal ledges, and shade overhangs, designed accordingly. Larger, set back windows are fine in this application, as are horizontal strip windows that let in sunlight only where desired, say along the bottom of a wall. Devices that work well to shade balconies at hot times include roll-down canvas awnings, which need restraining to prevent flapping and ripping. Avoid bright colours which fade quickly, as anything that is repeatedly exposed to sunlight will do: fabric, timber or painted surfaces, fixtures and furnishings. Empower residents to protect not just their own possessions, but the building itself. At the opposite extreme, **south-facing units** here receive no direct sunlight save for at midday in mid-Summer, and so should be designed to capture natural light and warmth. Especially lower down in a building, they are prone to damp and cold, so avoid placing them on the bottom three floors and make sure some sun reaches the back (entrance) walls and spaces of the home. Large exterior windows make these flats brighter and cosier, but glass is a poor insulator so they will need heavy curtains to stop warmth escaping. Overhangs, window surrounds and screening devices are redundant here. Instead, building footprints or unit plans that are rotated or staggered will *invite* east or west sunshine, as will pop-out rooms or balconies. Lastly, **west-facing units** are least desirable here, as flats experience large seasonal variations and are harder to control climatically. In Summer, spaces get very hot from the relentless afternoon sun, so aim to exclude most direct rays from the unit and force cross-ventilation. In winter the sun is weaker, lower (so more often obstructed) and sets earlier, so aim to capture and retain as much warmth as possible. One solution is to use tall, thin strip windows with deep reveals and shaped surrounds. Another is a double-skin façade with large windows inside and operable vertical louvres outside that pivot through 90° (from totally open to totally closed). Fixed vertical fins of timber, fibre cement or concrete, angled at 45°, also work.

PLANNING

31 Flexibility, openness & personalisation

Compartmentalised flats are less appropriate for modern lifestyles and the way locals here typically occupy residential space. Instead, design generous plan layouts that adapt to being used differentially: a large open-plan space that can be subdivided with movable screens, units or furniture, is preferable to more, smaller rooms. A home's front door entrance threshold is traditionally an important site for personalisation, so each Verticolapa flat has its own mini-stoep defined by a 25mm step up. The recess is 400mm deep to hold a Welcome mat and its length depends on unit size—around 1200mm for a bachelor and twice that for a large unit. In one wall of the recess is a hip-height cut-out of the sort used in the past for milk deliveries, to hold personal items like an ashtray or incense burner. Occupants can decorate the recess as desired with standing or hanging items like a shoe rack, umbrella stand, litter tray or plants.

32 Rooms

Design and locate bedrooms with their use in mind: sleeping spaces are ideally cool, dim and quiet. They need enough room for a double bed or a single/bunk beds and a desk, and built-in storage for clothes and personal items, but much more is a waste. Some outlook is good, but views are not priority, so bedrooms can be located behind a balcony or at the rear of the unit. Embrace the 'half' bedroom as a room type, but instead of enclosing a balcony, plan this in at design stage. For example, an articulated study nook off the lounge might take a sleeper couch and close off with a curtain. Open-plan living areas should be sized relative to occupant numbers. A Verticolapa's larger-than-usual structural bays mean spaces are readily zoned for different activities, and movable L-shaped timber room dividers, supplied as a standard feature, facilitate this process. Fixed semi-permeable features such as an open staircase or wall unit work similarly well to define different zones, yet maintain visual connection and flow. Avoid built-in furniture which restricts layouts, and electrify all quadrants of living areas to reduce the need for adaptors and extension cords. For privacy, avoid doors that open from living areas directly into a bedroom or bathroom, and if this does occur, screen the opening. Locate kitchens adjacent to living areas. A completely or partially open kitchen works best for flow and visibility, otherwise install a serving hatch, or use half-height walls with countertops. An island or bar counter doubles as a dining surface. Leave a 600 x 600mm space for a fridge, and build in an electric oven and a hob with two or four plates. Large flats need a second space for a washing machine, freezer or dishwasher. Ventilate the space well to exhaust smells and smoke, and try to include an outlook and let some sunlight in. In flats with only one bathroom, provide a shower, window and access off a passage, not a bedroom. Duplex units require a guest WC at entrance level. In flats with 1.5 beds or more, the WC can occupy a separate adjacent room, and for two or more beds, a second WC pan adds huge utility. For three or more beds, consider including a compact master *en suite*. Where a unit has two full bathrooms, give the second a bath, and if used, connect internalised wet areas to outside with an open duct or high-level ventilation 'tunnel' so steam can escape. Build in and tile shower bases and use metal bathtubs that can be re-enamelled. Suspend geysers on a screened, slatted shelf above the shower or bath, and make thermostats readily accessible.

FINISHES

33 General approach

Plain, truthful interior surface finishes like concrete, timber and white paint make a building less likely to date, and each successive occupant gets a blank canvas—a neutral, hardwearing interior—that is customisable to suit their style, habits and possessions. If desired, colour accents and more refined detail can be added, for example glass mosaic tiles for a shower or splashback, but it is safest to stick to a neutral palette so as to offend as few future occupants as possible. On moving out, residents must return their Verticolapa flat to its original condition, for example

by lifting the carpets they installed, repainting the purple walls and reinstalling the original light fittings.

34 Floors, walls and surfaces

In a warm climate, the most practical floor finish is a hard one that stays cool, is durable, easy to clean and repair, and can be 'dressed up' with mats and rugs as desired to add warmth and colour. Smooth, sealed, screeded concrete is a good finish for kitchen, bathroom and living area floors. Added pigments will enrich them, for example red or ochre oxides for earth hues or copper for a blue-green tint. Timber floors are first prize for living areas and bedrooms, either renewable hardwood veneer on a multilayer substrate, or if reclaimed hardwood can be sourced, solid planks or parquet. Neutral, faded or distressed timbers are preferred to those with orange/yellow tones, and simple timber skirtings can be left raw and sealed, or painted to match horizontal or vertical surfaces. For tiled floors, hardwearing stone or ceramic tiles in plain mid-range or dark shades are good, but always require a sound reducing underlay. Interior walls are painted in good quality white PVA, except for every so often, a sealed, off-shutter concrete or charcoal-painted feature wall. It is only necessary to tile bathroom and kitchen walls in wet areas; the rest can be painted. Specify plain, small-format wall tiles like rectangular subway or classic square 200 x 200mm ones in white, grey, black or a mix. Kitchen and bathroom counters are best made of hardwearing, all-through materials such as stone or sealed concrete, or to add colour and interest, solid resin-based acrylic is an upmarket option. Again, avoid composites and laminates.

35 Fixtures, fittings & cabinetry

Use simple, robust, timeless sanitary fixtures. Even small kitchens deserve a sink with an integrated prep bowl and for units with two beds or more, a double sink is essential. Drop-in stainless-steel types work best. For bathrooms, specify standard white ceramic fixtures and solid metal taps, spouts and showerheads from established local manufacturers. Avoid wall-hung toilets and sinks and concealed cisterns, and build in accessories (soap dishes, toilet roll holders) wherever possible. Counter-top basins are fine if there is surface space for soap, toothbrushes etc., and coat hooks can work in lieu of towel rails. It is recommended to provide neutral window coverings (curtains; blinds) as a standard fixture in all rental flats. For lighting, milk glass cylinder, ball or teardrop fittings, ceiling-mounted or pendant, work with any décor. Generous built-in storage and display space makes a flat into a home, so use space-saving solutions—things that slide, fold, hang, or serve multiple functions—and activate all available vertical space. Rethink the idea that everything must be hidden. In kitchens, open shelving for crockery and pantry items is convenient, hygienic, and less prone to damp and pests. Cupboard doors, if used, might have open panels with mesh inserts, and letting cabinetry 'float' 100mm off the floor on legs instead of closing it off with kickplates allows floors to be cleaned properly. Avoid composite materials like laminated chipboard which peels and swells, instead building joinery from all-through timber products that can be sealed or painted; renewable hardwood and MDF (Supawood) are two options. A wall-mounted medicine cabinet and shaving mirror complete a bathroom, and a full-height wall mirror makes any small space feel bigger.

36 Services

Modern appliances and devices are in constant need of power, so aim to over- rather than undersupply electrical outlets. Low level SSOs in living areas and bedrooms should be numerous so as not to restrict furniture layouts; standardise and downplay plug points and switches to blend in. Fit energy-saving light bulbs, make it policy that occupants do the same, and encourage the private use of solar lighting by making cheap solar jars or similar available from the collective. Anticipate the use of gas for cooking, and design kitchens to take portable LPG bottles up to 9kg in line with safety regulations. Climatically responsive design eliminates the need for air-conditioning, but sunny flats may still need mechanical ventilation in summer. Sturdy ceiling fans with natural or painted timber blades work best in bedrooms. Living areas require draughts that carry away warm air, but don't bother occupants or blow things around, for which user-supplied oscillating portable standing fans work well. Heating should seldom be required and when it is, portable electric space heaters are most effective.

BUILDING OPERATIONS

37 Managing body

The collective, as a registered non-profit housing provider, employs a core team—a secretary, and staff to administer personnel and finances, including the block's solidarity fund and various State subsidies. An estate officer looks after the fair and compliant allocation of a Verticolapa's rental units, as well as the sale of units—advertising, viewings, and facilitating their transfer. At the helm is a board of directors, typically comprising owners or tenants with some built environment or administrative experience, whose core function is the strategic management of the collective, and promotion of its sustainability goals. The board meets monthly to monitor spending and operations and award major contracts. At these meetings are the supervisor, maintenance person and chairperson of the residents' committee, to report on project progress, raise issues and communicate back to building occupants. The board is elected at an AGM to which all members are invited.

38 Staff and their facilities

Those employed by the collective to run the building are its primary custodians and they must work well as a multilingual team. Hiring practices must be fair and transparent, so while members of the collective are encouraged to apply, posts are always awarded to the most suitable candidate. As the block has no dedicated staff quarters and staff are required to live on site, working for the collective automatically elevates one to the top of the waiting list for suitable rental units, but not the other way around. Building-related benefits are not to be traded for reduced salaries, as this muddies the live/work relationship and makes room for nepotism and exploitation. It is a good idea to display a board introducing the team to

residents and supply branded workwear—T-shirts, overalls, lanyards—so on-duty staff are identifiable. Provide staff toilets, showers, changerooms with lockers, and a bright breakroom with a kitchenette.

39 Supervisor

Employed via competitive application and interview process, the supervisor is required to live on site for the duration of their contract, so if not already a resident, they will need to join the collective and be prioritised for a rental unit to suit their household. The two most important skills for a supervisor are organisation and communication, as the post requires them to manage droves of information simultaneously—about the building, its units, and the residents. Fluency in English and the main or second language of the region (so isiZulu, here) is non-negotiable, as are excellent people skills and strong cultural sensitivity. In a large Verticolapa, the role might be filled by a team of two related individuals, for example a mother and son.

40 Security personnel

An important component of a Verticolapa's security infrastructure is 24-hour active human surveillance. Experience in this context suggests this is best carried out in rotational shifts by trained security receptionists who are employed by the collective and live in one of the rental units with their family, or sharing if they are single. This brings continuity, lets relationships develop, and lends reassurance to single or vulnerable flat-dwellers. Equipped with a *tonfa*, pepper spray and a building-issued cell phone, a security guard's role is to monitor activities in and around the building, keep track of the number and location of non-members, and raise an alarm if something untoward is spotted. This might entail alerting another guard, the supervisor, Neighbourhood Watch, police or a private company depending on the area and incident. Larger buildings will require two guards per shift. This system serves to bridge the class chasm between protector and protected, confuse potential criminals, and leverage the tendency to act territorially on one's home turf.

41 House rules

A Verticolapa's house rules are best thought of as a 'living' set of guidelines custom-made for a specific context, yet designed to adapt over time. They should be displayed in the lobby, available in several languages, and written in a simple, non-threatening tone, ideally as negative limitations phrased in a positive way e.g. *Refrain from shouting in the building; keep voices down in common areas and teach children to do the same.* The Code of Conduct's purpose is to protect the building's infrastructure and culture and promote a harmonious living environment. By clearly articulating what is expected equally from all who use and inhabit the building, rules empower residents to negotiate differences amicably in a proactive (not reactive or antagonistic) way. The goal is to present a solid behavioural framework based on which a community can self-regulate, so that the supervisor or collective seldom needs to intervene.

42 Pets

As far as is practical and fair, a Verticolapa is pet-friendly. Residents can keep birds, fish, small reptiles, rodents and other creepy-crawlies in flats, in cages or tanks that constitute clean, safe environments, as long as pets do not disturb others. A household may keep one small un-caged mammal not exceeding 16kg, which counts as a 'half person' in occupancy terms. This allows for all breeds of cat and about half of popular dog breeds including Daschunds, most Terriers, and French Bulldogs. Each block adopts its own set of rules concerning pets—where they are allowed to roam, how waste is disposed of (and indiscretions dealt with), and what constitutes a nuisance in different situations. Pet owners are responsible for the welfare and behaviour of their animals and to ensure they don't damage property.

43 Visitors and outside guests

A Verticolapa endeavours to create an environment where residents feel comfortable inviting friends and family to their home, and at the same time maintain others' privacy and safety, and protect private and common assets. Visitors sign in at reception with their name, cell number, and the name and flat number of the resident being visited. Issuing numbered cards to visitors makes it quick to calculate how many, including those working inside flats, are in the building at any given time, and monitor who stays overnight and how often. Within occupancy limits, this is not an issue, and even outside of these, flexibility is advisable. One possibility is a 'crowding waiver' for say two nights a month, to account for a cousin arriving unannounced or a teen hosting a birthday sleepover. For longer stays, the building has a guesthouse consisting of some small, serviced flats spread around the building, to be let by non-members for periods from one night to one month. Bookings and payments are managed by the collective, check-ins and outs by reception, and access discs programmed to work for the duration of stay. Guests referred by residents are prioritised—an overseas colleague, or parents whose daughter just had a baby—and might also qualify for discounted rates. It is important to make clear in advance how a Verticolapa works, and good practice to orientate first-time guests.

44 Caretaking

Any building needs proper, regular maintenance. Awareness in this regard is low and residents should be educated on how high-rise systems such as elevators and fire-fighting installations work and should be used. A Verticolapa has a full-time maintenance person living on site, someone with a background and experience in construction. Based in the workshop, they respond to requests lodged with the supervisor and schedule and carry out repairs, internal capacity permitting. Larger blocks may hire an assistant or a specialist painter or plumber, for example. For big jobs, the head of maintenance will solicit and compare quotes from approved contractors, arrange access, oversee and inspect work, forward invoices, and report back. To care for its soft landscaping, a Verticolapa has a full-time gardener. Also employed by the collective and living on site, the ideal candidate is energetic, green-fingered and versed in

horticulture, with knowledge of local plants, soils, weather, and ideally suppliers and nurseries too. Good people skills will help the gardener work alongside residents, who are likely to want to get involved. Then, in a block of flats, regular, thorough cleaning is crucial to protect residents' health and safety but also the building's longevity. Sewer and stormwater pipes and drains must not be allowed to block, and ducts, bin yards and service areas must be kept clean, or smells and pests quickly become problematic. High traffic common areas pose a safety hazard (slipping, falling) or health risk (disease) when dirty, so the collective directly employs a full-time janitorial team. As a guide, one cleaner per 40 flats translates to a team of 2 to 6 shift workers depending on block size, and cleaners are encouraged (but not obliged) to live on site. In terms of waste, everything that goes into the building, if not carried away in effluent, is reabsorbed in some form or collected to be processed into something new. On moving in, residents commit to recycling household waste and get three coloured bins, two small ones for trash and organic waste and a large one for mixed recycling, along with an infographic of how things work. Each floor has a ventilated bin area with coloured wheelie bins where residents deposit their waste to be carted down on collection days. Organic waste goes into a compost heap or worm farm to produce fertilizer for gardens, and unwanted clothes and electronics are placed in a designated room to be donated or responsibly disposed of. Finally, pest control in a high-density setting requires ongoing intervention. Verticolapa flats are sold or let pest-free, as they are treated between occupants. Thereafter, each unit receives one free annual treatment carried out by a contractor familiar with the building's layout and structure. If needed, top-up services can be paid for by the occupant. Common areas are treated twice annually with a focus on wet areas and bin yards, and new residents are briefed on various techniques to discourage pests.

45 Deliveries and moving

A block of flats needs a service entrance so that delivery and moving vans can get near the goods lift to offload boxes, equipment, and furniture without disrupting day-to-day operations. A basement loading area is ideal, with space to turn and a 3m clearance height along the path of travel. Provide sturdy flatbed and tip-trolleys for resident use and ask residents to supply moving schedules so efforts can be co-ordinated. Just one unsupervised move can do considerable damage to a building, so on busy days a staff member can be assigned to monitor and direct activities, or two (strong) staff made available for hourly hire to help residents move. This protects the structure, cycles income back into the collective, and reduces the security risk posed by strangers.

46 Resident committees

The Residents' Committee manages a Verticolapa's social life. The self-constituted volunteer body elect a Chair, a Treasurer (who liaises with the collective to apply for and manage solidarity funds) and any other desired sub-committees or work groups such as an events or beautification team. They co-ordinate resident-led initiatives and address grievances that arise between neighbours, or between residents and the collective or its employees. The committee plan and host a regular (e.g. quarterly) forum where all members can participate in decision-making, ask questions, make suggestions, or raise discussion items. A large collective might also decide to elect an impartial ombudsman to assist with resolving disputes. For emergency preparedness, a Verticolapa has a safety committee chaired by the supervisor and comprising volunteer residents from each floor. Safety officers receive briefing packs and high-vis vests, and connect via a mobile messaging app so they can stay abreast of early warning systems and quickly raise alarms. Fire is the most common disaster to befall a block of flats, but other scenarios to be planned for include siege that results from terrorism, unrest or war, occupants being confined to the building due to chemical attack, infestation or epidemic, long-term food shortages, or in this context, a tidal wave or protracted flooding. Moving into a Verticolapa constitutes a commitment to participate actively in urban life based on an understanding that, in addition to an autonomous household with the privacy and liberties that brings, one also belongs to a community. On the first weekend of the month, new residents attend an orientation led by the supervisor, are introduced to core personnel and shown around. Each household gets a booklet with information about the collective, house rules, safety procedures and other useful details like relevant contacts. This way, all residents start on equal footing and can enjoy the benefits of their new home and contribute to the collaborative project in the way that best suits them.

END

Final words

The outcomes of this study are hopeful. As it set out to do, research documented in depth the residential high-rises of Durban Beachfront and the people who live in them today. Most importantly, and in answer to the core research question, findings confirmed that a residential building can have a pronounced effect not just on one's experience of living in a city, but on the part of the city in which it sits, and as such, is perfectly placed to be leveraged as a tool for spatial justice. In concluding, I have suggested how this could happen in the Durban context, in a manner that caters for the diverse cross-section of people already living here, and draws in others for whom the area was previously an inaccessible, impractical or unattractive place to live. Critically, the model looks to the future to meet Anthropocene challenges with built-in flexibility and adaptability. New residential buildings, in addition to fulfilling current everyday needs like parking and safety, must anticipate all-encompassing future change: the fall-out from any number of man-made or natural disasters, or more optimistically, a shift in governance or economic structures that alleviates mass conflict, drastically reduces inequality and eliminates the need for walls, fences and security guards in our cities. The pioneer buildings of the brave new world must be equipped to look after their own

needs as well as those of their inhabitants. A good residential building, I believe, can do much more than keep occupants warm and dry; it can fulfil a need to be close to nature and other humans, and belong to a greater social entity. It can also make a positive visual and operational contribution to the city—a structure that, without imitating, reinforces the *genius loci*, saying 'I am of this time and place', instilling pride in users. I hope that this work goes some way towards empowering Architects and other city-makers to balance the desire for beauty and comfort with the need for longevity and equity, in creating responsive, high-quality spaces that are robust and homely and make it easy to dwell happily alongside many others, across whatever differences, real or perceived.

The broad scope of this study, arguably even (with hindsight) *too* broad for a doctoral dissertation, means that an exciting research frontier awaits. In closing, I will touch upon some of the opportunities identified.

The thesis considers architecture—and by implication architects—to risk near-complete irrelevance in local urban development unless it recalibrates its activities and sharpens its focus. This begs an urgent and thorough investigation into the barriers that exist with respect to densification, urban renewal, and the development of integrated urban housing in South Africa, and the roles of various stakeholders therein.

The work aims to be objective and relatable enough to be used as a resource by government, not just for its empirical findings and normative proposals but to spark further studies. Critically, it is well-placed to open doors and serve as a platform for honest dialogue around the problems, possibilities, and potential of South African cities, and the need to revisit the technical regimes that presently inform housing and neighbourhood development.

The work bakes in a distinction early on between the 'use value' and 'exchange value' of urban space, choosing to privilege the former. As such, little consideration is given to the role of existing landlords, property owners and developers in the new housing delivery process proposed here. Instead, I devote considerable attention to the role and composition of intermediary bodies in future development, presenting a scenario in which they are the ones to 'leverage' the high-rise building form for spatial justice.

Realistically however, developers, as representatives of the dominant capitalist forms of value extraction and those with the greatest access to capital—and consequently the most potential to enact socio-technical change and dictate its trajectory—cannot simply be excluded from the conversation. Research into mechanisms by which developers, from an inexperienced SHI start-up to a multi-national corporation, can choose (rather than be coerced or forced) to become earnest stakeholders in a more just city-making process, could inform an entire dissertation on its own.

This research is situated in the Global South and employs inequality to frame spatial (in)justice, yet it engages little with other, similar city contexts. It has been suggested that Durban work viewed in relation to the high-rises of cities like São Paulo, Beirut, Santiago de Chile and Cairo, and the tall tenements of Nairobi for example, would make for fascinating and much-needed insights into contemporary urban inequalities. There is also appetite to see aspects of this study published, to contribute to the ongoing debate around inequality, diversity and satisfaction in urban residential environments. It is hoped that the immersive methodology used here can offer a compelling set of insights, even lessons, for academics and practitioners operating at the architecture/urban studies/geography interface and seeking, as I have done, to read today's urban environments in unconventional ways.

Lastly, and on a more practical note, is the question of 'What next?' for the model Verticolapa. What further research could see it refined or expanded? And how might it be tested?

What comes to mind is the model's potential as a tool for teaching and learning. For Architecture students, Design Guidelines such as those mandated for complex housing or office parks are great for honing problem-solving and creativity within strict parameters. Given out as part of a project brief to design a Verticolapa for a real urban site, there is no telling what innovations fresh young minds, especially those with an implicit understanding of inequality and multiplicity, would come up with. Locally, the guidelines could be given as a project to students of Housing, Property Development and even Construction Management, to focus on the planning, legislative, financing and delivery aspects of the model rather than the design and activation of the building itself. A model that was iterative, so open to collective self-reflection and input from different disciplines and contexts, would see itself constantly updating, improving, and increasing in relevance, and has the potential to grow into something formidable.

Finally, and in the spirit of much of the ground-breaking architectural work presented in this thesis, the best way to test something is to prototype it. The construction of a real-life Verticolapa, even at a small scale, in the Durban context in the near future, would require not only immense bravery but an unwavering faith in the power of relatively small action to initiate positive, lasting change. But that doesn't mean it couldn't happen.

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AFTERWORD

In the five-and-a-half years it took to complete this study, the world changed irrevocably, but not in the slow, steady way it can be relied upon to do: it ruptured. In January 2020, Covid-19 arrived in South Africa, and on March 27, the country went into hard lockdown at the start of a State of Emergency that was to last over two years. Confined to their homes in the sky, Beachfront flat-dwellers, like everyone else, had to rescript the everyday and invent new ways of working, teaching, learning and playing.

During this time, in my own block, the most affected group were elderly Alzheimer's sufferers. Without the day-to-day rituals that marked the passage of time—a walk to the shop to buy the paper, Sunday breakfast at Wimpy, live sports on TV—life became increasingly confusing and anxiety-inducing, and even for those in the early stages of the disease, cognitive faculties quickly declined. A blanket ban on alcohol and tobacco products put an end to evening nightcaps, and smokers had to turn to neighbours to source them expensive, low-quality black-market cigarettes, a process that proved stressful for law-abiding seniors. Mandatory mask-wearing and social distancing in the building's common areas meant that when they did encounter neighbours, only their eyes were visible and there was no physical contact. Those who lived alone stood little chance, and even some with supportive, able-bodied partners and access to the best medical care, did not make it. Even seniors who appeared perfectly healthy going into the pandemic, with the stress of persistent uncertainty and (for some) financial challenges, and without so much as a smile or a hug for months, fell prey to illnesses they never knew they had. While none I know died from Covid-19, the pandemic was responsible for their demise. In North Beach, two pensioners in different buildings ended their lives jumping from high windows.

Another group for whom this time was inordinately difficult was children, especially those too young to comprehend what was happening. Confined inside a flat 24/7, children attending resourced schools and with internet at home and capable parents, were able to continue learning online, but less-resourced children, with no such possibilities, struggled immensely, as did their academic performance. Without spaces to play and release energy outside the home, cabin fever quickly set in for families.

Other relationships came under strain, too. Younger couples co-habiting, unaccustomed to this level of confinement, seemed worst affected, and especially where alcohol was involved, tempers could flare quickly. The nature of high-density living and our building's compact doughnut layout meant that domestic violence was detected immediately and quelled by concerned neighbours or building staff. Construction work was prohibited during this time, but this did not deter one unscrupulous new (absent) buyer who was renovating a large top floor flat, from moving his building gang in to continue work. The Chairman, who lived in the building, quickly put a stop to this.

During lockdown, the law protected tenants from eviction for non-payment of rent. For those who lost jobs or were subject to reduced earnings—quite common in our block due to the high number of residents employed in hospitality, tourism and entertainment—this was a lifesaver. Private landlords took a fiscal knock, with the worst-affected being multiple flat owners. With almost the full resident population on-site all the time, the running costs of the building went up: sanitiser stations and Covid-related signage were installed, a compliance officer assigned to monitor mask-wearing, comings and goings, and cleaning and waste removal regimes intensified, requiring more staff on shift. Our high-rise became a sanitary enclave, and for at least the first nine months, the resident body, to my knowledge, remained Covid-free. Helping behaviour persisted, with younger residents doing shopping for the elderly and those shielding. And what started as a few neighbours assisting each other to source contraband alcohol and cigarettes, grew into a full-blown informal trade network, spread across multiple flats and offering everything from PPE and Ivermectin to hoodies and homemade indoor gardens. Early on, people were very cautious and social interaction in the block, even visits between family members residing in different flats, all but ceased. Some took to walking slow laps around the inner courtyard for exercise, and when visiting or meeting did occur, it tended to be outside the flat entrance in the open passage, appropriately spaced and protected. When the virus did get inside a North Beach high-rise, it reportedly spread quickly, with dire implications for retirement homes. We stayed connected to the neighbourhood grapevine, and so heard how the virus moved and when it took one of our community—which included the wife of a building caretaker and a Manager at the local Pick n Pay. Essential workers—in our block healthcare staff, schoolteachers and a policeman—brought a semblance of normality and some

connection to the outside world. As things opened up, I began to see more open front doors, and more people moving around the building and venturing into the passages. Social interactions resumed, but in a different form. Limited to non-verbal communication at distance, residents developed an odd sort of sign language comprising hand motions, blinking and head movements, and sometimes, comically, full body enactments. How much actual information was transmitted in these exchanges is questionable, but their social value and the solidarity they engendered, was huge.

As soon as restrictions eased to allow people out for exercise, the promenade was brimming to capacity with local residents, and Durbanites living within a 5km radius of the shore. The rest of North Beach's public realm changed during this time, not so much physically but in the way it was used. eThekwini Municipality's response to homelessness entailed the creation of tented camps in and around the central city, providing street-dwellers with a safe bed, daily meals, healthcare and support for drug dependency. Two camps were on the fringes of North Beach—the old drive-in site and the vacant land behind Grosvenor Court—and a third just to the north on the People's Park/Moses Mabhida Stadium site. Muslim residents of North Beach and the feeding schemes to which they belonged, provided food for these camps, with elder family members cooking inside the flat and youngsters tasked with deliveries. The absence of vagrants in Carpendale Park, coupled (I believe) with a renewed appreciation for the open space on our doorstep, meant that residents of all types began using the space—to picnic, pot houseplants, relax in the sun or take children to the playground. A group of local youngsters from Summer Sands and the surrounding high-rises began to meet every evening to play soccer, and I smiled the first time I saw a Somalian family—a mother and four younger children—out playing a game of cricket one afternoon. Before long, a clique of local men, unemployed and residing in several different blocks, adopted a spot in the shade of the abandoned substation overlooking the path, where they would drink, chat and watch the world go by. For some residents, they were probably indistinguishable from the vagrants that preceded them, but for most who knew them, they provided the 'eyes on the street' that made it feel safe to walk through the park, to reclaim the right to use city space.

Then, in the early hours of 10 July 2021, I awoke to the sound of helicopters and the smell of a city on fire. What began in KZN as political protests following the arrest of former president Zuma, escalated into widespread rioting and looting, and violence on a scale not seen since the end of apartheid. The city shut down, and with roads blocked and many warehouses and shopping centres destroyed, food supply chains ceased. Within a day or two, supermarket shelves were empty of basic foodstuffs, not just fresh produce but staples like flour, oil, rice and maizemeal. That day, I learned to bake bread, and my partner stood in a supermarket queue for hours to buy whatever frozen veg and tinned goods he could find. As chaos escalated, roving bands of looters began to infiltrate suburban residential space, and communities stepped up to protect their neighbourhoods. Self-styled resident militia, armed with whatever they could get their hands on, barricaded roads and patrolled their neighbourhoods in round-the-clock shifts. North Beach, with only a few access points, was easy to isolate spatially. I don't believe there was ever a chance that the neighbourhood would come under siege; the residential high-rise is not an easy form to attack, and the spoils to be gained, hardly worth the effort, but the army of residents that took to the streets with firearms and cricket bats, weren't taking any chances. Efforts were led by existing community networks, already very organised. Public meetings were held in Carpendale Park to assign duties, and makeshift barricades erected where every incoming vehicle was checked. The feeding schemes were called upon, and on the third day an owner-occupier in our block went from door to door with a shopping trolley distributing loaves of bread and long-life milk to anyone who needed it. Two days later, the trolley contained potatoes, tomatoes and onions, and the next, bread and milk again; nobody went hungry. It was a strange, apocalyptic time, but not for a moment did I doubt that this too would pass. My community had my back.

There is more, but I will stop here. I thought it apt to include this 'behind-the-scenes' narrative to be interpreted in the context of this study. The events of recent times reinforced the findings of my research and the pressing need for new urban forms fit for a 'new normal', but they also made plain the speed and unpredictability of change in these uncertain times, the power of collaborative action, and the sheer resilience of the human spirit.

REFERENCES

Reference List

Alexander, C. 1977. *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.

Bernstein, G S. 1985. The Architecture of Repression: The Built Environment of George Orwell's 1984. *Journal of Architectural Education*, 38(2): 26-28.

Bos, C. 2012. Hello Stranger: Phenomenology and Topography of the Megacity. *AD: City Catalyst*, 219: 136-141.

Bremner, L. 2004. Bounded spaces: demographic anxieties in post-apartheid Johannesburg. *Social Identities*, 10(4): 455-468.

Busiol, D. 2016. A review of research on the consequences of living in a high-density city. *International Journal of Child and Adolescent Health*, 9(4): 443-453.

Brophy, PC. and Smith, RN. 1997. Mixed-Income Housing: Factors for Success. *Cityscape: A Journal of Policy Development and Research*. 3(2): 3-31.

Charlton, S. 2014. Public housing in Johannesburg. In Harrison, P., Gotz, G., Todes, A. & Wray, C. Eds. *Changing Space, Changing City: Johannesburg after apartheid* - Open Access selection (176–193). Wits University Press.

Choy, T. 2010. Air's substantiations (talk) *for* Berkeley Environmental Politics Colloquium. Available: http://globetrotter.berkeley.edu/bwep/colloquium/papers/ChoyAirEP.pdf (Accessed 11 February 2019)

Citizen Jane: Battle for the City (film). 2016. Directed by Tyrnauer, M. and Eisenhardt, B. USA: Altimeter Films.

Clarke, S. 2015. Racism: psychoanalytic and psychosocial approaches. In: Murji, K. and Solomos, J. *eds. Theories of Race and Ethnicity*. Cambridge University Press.

Craighead, G. 2009. *High-rise security and fire life safety: Third edition*. Butterworth-Heinemann.

Denison, E. 2012. China's Macro-Planning Policies: Architectural Catalyst or Constraint? *AD: City Catalyst*, 219: 50-57.

Dennis, R. 2008. 'Babylonian Flats' in Victorian and Edwardian London. *The London Journal*, 33 (3): 233–247.

Dikeç, M. 2001. Justice and the spatial imagination. *Environment and planning A*, 33: 1785-1805.

Dixon, J. and Durrheim, K. 2000. Displacing place-identity: a discursive approach to locating self and other. *British journal of social psychology*, 39: 27-44.

Duncan, P. *ed.* 2015. *World Design Capital 2014: The story of an African City*. Cape Town: Cape Town Design NPC.

Durrheim, K. & Dixon, J. 2001. The role of place and metaphor in racial exclusion: South Africa's beaches as sites of shifting racialization. *Ethnic and Racial Studies*, 24, 433-450.

Dutton, T. 2014. Econocide Over-the-Rhine. W*orking paper*. Available: http://truth-out.org/news/item/24138-econocide-over-the-rhine (Accessed 8 December 2020)

Edwards, M. 1989. Durban Beachfront Redevelopment: A multi-disciplinary approach. *Parks and Grounds*, 48: 13-29.

Erwin, K. 2004. Place, Race and Belonging: A case study in Albert Park, Durban. PhD Soc., University of KwaZulu-Natal.

Erwin, K. 2015. Race, Place and Identity in Kenneth Gardens: Narratives from a Low-Cost Housing Estate in Durban. *Urban Forum*, 26: 187–201.

Evans, G., Wells, N. and Moch, A. 2003. Housing and Mental Health: A Review of the Evidence and a Methodological and Conceptual Critique. *Journal of Social Issues* 59(3): 475-500.

Fabricius, D. 2012. Revolution of the Ordinary. *AD: City Catalyst*, 219: 42-49

Firley, E. and Gimbal, J. 2011. *The urban towers handbook*. John Wiley & Sons.

Fraser, J C., Oakley, D. and Levy, D K. 2013. Guest Editors' Introduction: Policy Assumptions and Lived Realities of Mixed-Income Housing on Both Sides of the Atlantic. *Cityscape*: *Mixed Messages on Mixed Income.* 15(2): 1-14.

Freeman, L. 2001. The Effects of Sprawl on Neighborhood Social Ties: An Explanatory Analysis. *Journal of the American Planning Association*, 67:1, 69-77.

Frescura, F. and Maud-Stone, B. 2013. *Durban: once upon a time...* Durban: Archetype Press

Friendly, A. 2013. The right to the city: theory and practice in Brazil. *Planning Theory & Practice*, 14: 158-179.

Gifford, R. 2007. The Consequences of Living in High-Rise Buildings. *Architectural Science Review*, 50(1): 2-17.

Gordon, P. and Ikeda, S. 2011. Does density matter? In: Andersson, DE., Andersson ÅE and Mellander, C. eds. *Handbook of creative cities*. Edward Elgar Publishing. 435-455.

Graham, S. and Hewitt, L. 2012. Getting off the ground: On the politics of urban verticality. *Progress in Human Geography*, 37(1): 72–92.

Graham, S. and Thrift, N. 2007. Out of order: Understanding repair and maintenance. *Theory, culture & society*, 24(3): 1-25.

Harris, A. 2015. Vertical urbanisms: Opening up geographies of the three-dimensional city. *Progress in Human Geography,* 39(5): 601–620.

Harrison, P. 2003. Fragmentation and Globalisation as the New Meta-Narrative. In: Harrison, P. and Huchzermeyer, M. 2003. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 13-25.

Harvey, D. 2003. The right to the city. *International Journal of Urban and Regional Research*, Volume 27(4): 939-41

Hanley, L. 2012. *Estates: An intimate history*. London: Granta Books.

Hentschel, C. 2015. The infrastructural passions of urban mutuality. *Anthropology Southern Africa*, 37: 3-4, 161-173.

Hillier, B. 2008. Space and spatiality: what the built environment needs from social theory. *Building Research & Information*, 36: 216-230.

Huang, S-C. L. 2006. A study of outdoor interactional spaces in high-rise housing. *Landscape and urban planning*, 78: 193-204.

Huchzermeyer, M. 2003. Addressing Segregation Through Housing Policy and Finance. In: Harrison, P. and Huchzermeyer, M. 2003. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 212-226.

Irurah, K. and Boshoff, B. 2003. An Interpretation of Sustainable Development and Urban Sustainability in Low-Cost Housing and Settlements in South Africa. In: Harrison, P. and Huchzermeyer, M. 2003. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 248-261.

Jacobs, J. 1961. *The death and life of great American cities*. Harmondsworth: Penguin.

Jacobs, J.M. 2006. A geography of big things. *cultural geographies,* 13: 1-27.

Kallus, R. and Law-Yone, H. 2000. What is a neighbourhood? The structure and function of an idea. *Environment and Planning B: Planning and Design*, 27: 815-826

Kearney, B. 2002. Bamboo Square: A Documentary Narrative of the 'Indian and Native Cantonment' at the Point, 1873 to 1903. *Journal of Natal and Zulu History*, 20: 29-63

Keller, JD., Laakso, J., Stevens, C. and Tashiro, C. 2013. Ethnically Diverse HOPE VI Redevelopments: A Community Case Study From the Pacific Northwest. *Cityscape*: *Mixed Messages on Mixed Incomes.* 15(2): 29-46.

Kim, W. 1997. Effects of dwelling floor level on factors related to residential satisfaction and home environment in high-rise apartment buildings. PhD Architecture, Texas A&M University.

Kuo, F., Sullivan, WC., Coley, RL., and Brunson, L. 1998. Fertile Ground for Community: Inner-City Neighborhood Common Spaces. *American Journal of Community Psychology*, 26 (6): 823-851.

Lefebvre, H. 1991. *The Production of Space*. Translated from French by Nicholson-Smith, D. Oxford: Blackwell.

Lefebvre, H. 1996. The Right to the City. In: Bridge, G. and Watson, S. eds. 2002. *The Blackwell City Reader.* Blackwell, 367-374.

Maak, N. 2015. *Living Complex: From Zombie City to the New Communal*. Munich: Hirmer.

Mabin, A. 2005. Suburbanisation, segregation, and government of territorial transformations. *Transformation: Critical Perspectives on Southern Africa*, 57: 41-63.

Mackintosh, E.A. 1982. The meaning and effects of highrise living for the middle income family: A study of three highrise sites in New York City. PhD Environmental Psychology, City University of New York.

Marcuse, P. 2003. Foreword. In: Harrison, P. and Huchzermeyer, M. eds. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd. xii-xiv.

Marschall, S. 2001. The search for essence: 'Africanness' in 20th century South African architecture. *Southern African Humanities*, 13: 139-154.

Marx, C. 2022. *Urban value: A research agenda*. Seminar at Urban Futures Centre, DUT, Durban, 14 April. Available: https://dut4lifeac-my.sharepoint.com/personal/tharshnier_dut_ac_za/

Milgrom, R. 2008. Lucien Kroll: design, difference, everyday life. In: Goonewardena, K., Kipfer, S., Milgrom, R. and Schmid, C. *Space, difference, everyday life: Reading Henri Lefebvre*. Routledge, 264-282.

Mooney, G. 2008. Urban nightmares and dystopias, or places of hope? *Variant*, 33: 14–16.

Moriyama-San (film). 2017. Directed by Ila Bêka & Louise Lemoine, France: Bêka & Partners

Moroni, S. 2016. Urban density after Jane Jacobs: the crucial role of diversity and emergence. *City, Territory and Architecture*, 3: 1-8.

Morris, A. 1999. *Bleakness & Light: Inner-City Transition in Hillbrow, Johannesburg*. Johannesburg: Wits University Press

Morris, A.E.J. 1994. *History of urban form: before the industrial revolutions*. London: Longman.

Mumford, L. 1954. In Defense of the Neighbourhood. *Town Planning Review*, 24: 256-270.

Obeng-Odoom, F. 2015. The Social, Spatial, and Economic Roots of Urban Inequality in Africa: Contextualizing Jane Jacobs and Henry George. *The American journal of economics and sociology*, 74: 550-586.

Oelofse, M. 2003. Social Justice, Social Integration and the Compact City. In: Harrison, P. and Huchzermeyer, M. eds. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 88-105.

Orford, S., Dorling, D., Mitchell, R., Shaw, M. and Smith, E.D. 2002. Life and death of the people of London: a historical GIS of Charles Booth's inquiry. *Health & place*, 8: 25-35.

Pallasmaa, J. 2012. *The eyes of the skin: architecture and the senses*. Chichester: Wiley.

Park, K. 2012. Localising the Global. *AD: City Catalyst*, 219: 36-41.

Park, Y. and Newman, G.D. 2017. A framework for place-making using Alexander's patterns. *Urban Design International*, 22: 349–362.

Pieterse, E. 2003. Unravelling the Different Meanings of Integration: The Urban Development Framework of the South African Government. In: Harrison, P. and Huchzermeyer, M. 2003.

Confronting fragmentation: housing and urban development in a democratising society. Juta and Company Ltd, 123-138.

Purcell, M. 2013. Possible worlds: Henri Lefebvre and the right to the city. *Journal of Urban Affairs*, 36: 141-154.

Rosenbaum, J.E., Stroh, L.K., and Flynn, C.A. 1998. Lake Parc Place: A Study of Mixed-Income Housing. *Housing Policy Debate*, 9(4): 704-740.

Schmid, C. 2008. Towards a Three-Dimensional Dialectic: The Theory of the Production of Space. In: Goonewardena, K., Kipfer, S., Milgrom, R. and Schmid, C. *Space, difference, everyday life: Reading Henri Lefebvre*. Oxfordshire: Routledge, 27-45.

Schwartz, A. and Tajbakhsh, K. 1997. Mixed-Income Housing: Unanswered Questions. *Cityscape,* 3(2): 71-92.

Sennett, R. 2007. Una ciudad flexible de extraños/ A Flexible City of Strangers. *arq,* 66: 19-23.

Sennett, R. 2018. *Building and dwelling: Ethics for the city*. Farrar: Straus and Giroux.

Shu-Chun, LH. 2006. A study of outdoor interactional spaces in high-rise housing. *Landscape and Urban Planning*, 78: 193–204.

Simmel, G. 1903. The metropolis and mental life. In: Bridge, G. and Watson, S. eds. 2002. *The Blackwell City Reader.* Blackwell, 11-19.

Simone, A. 2004. People as infrastructure: intersecting fragments in Johannesburg. *Public culture*, 16(3): 407-429.

Simone, A. 2005. The right to the city. *Interventions*, 7(3): 321-325.

Simone, A. 2016. It's Just the City after All! *International Journal of Urban and Regional Research*, 40: 210-218.

Smith, D.M. 2003. Urban Fragmentation, Inequality and Social Justice: Ethical Perspectives. In: Harrison, P. and Huchzermeyer, M. eds. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 26-39.

Soleri, P. 1969. *Arcology: the city in the image of man*. Cambridge: MIT Press.

Soja, E. 2009. The city and spatial justice. *Justice spatiale/Spatial justice*, Vol. 1. Available: http://www.jssj.org/ (Accessed 24 January 2019)

Teston, EF. and Marcon, SS. 2015. Comparative study of quality of life of elderly living in condominiums versus community dwellers. *Investigacion y educacion en enfermeria*, 33: 53-62.

Thwala, W.D., Aigbavboa, C.O. and Ramovha, N.T. 2018. Housing Delivery: Making Sense of the Demand for State-subsidised Housing in South Africa. In: *Proceedings of the International Conference on Industrial Engineering and Operations Management*. Washington DC, September 27-29. IEOM Society International, 2487-2503.

Todes, A. 2003. Housing, Integrated Urban Development and the Compact City Debate. In: Harrison, P. and Huchzermeyer, M. 2003. *Confronting fragmentation: housing and urban development in a democratising society*. Juta and Company Ltd, 109-121.

van Leeuwen, B. 2010. Dealing with Urban Diversity: Promises and Challenges of City Life for Intercultural Citizenship. *Political Theory*, 38(5) 631-657.

Wilkinson, R. and Pickett, K. 2009. *The spirit level: why greater equality makes societies stronger*. New York: Bloomsbury Press.

Young, IM. 1986. The Ideal of Community and the Politics of Difference. In: Bridge, G. and Watson, S. eds. *The Blackwell City Reader.* Blackwell, 430-439.

Young, IM. 1999. Residential Segregation and Differentiated Citizenship. *Citizenship Studies*, 3(2): 237-252.

Online Articles

Anon. 2016. Mapping diversity: an exploration of our social tapestry. *StatsSA/Data Stories/Households*, 20 May. Available: https://www.statssa.gov.za/?p=7678 (Accessed 3 September 2020)

Anon. 2019. City unit works with problem building owners to upgrade properties. *Berea Mail*, 6 September. Available: https://bereamail.co.za/171060/city-unit-works-with-problem-building-owners-to-upgrade-properties-2/ (Accessed 7 April 2021)

Anon. 2020a. Details Revealed About 20-Story Johannesburg High-Rise with Affordable Housing. Council on Tall Buildings and Urban Habitat, 9 November. Available: https://www.ctbuh.org/news/details-revealed-about-20-story-johannesburg-high-rise-with-affordable-housing (Accessed 8 December 2020)

Anon. 2020b. Massive R3 billion mixed-income housing development launches in Cape Town. Available: https://businesstech.co.za/news/lifestyle/374176/massive-r3-billion-mixed-income-housing-development-launches-in-cape-town/ (Accessed 15 February 2021)

Ardé, G. 2020. The promenade, Durban's most democratic space. New Frame, 22 June. Available: https://www.newframe.com/the-promenade-durbans-most-democratic-space/ (Accessed 8 December 2020)

Broughton, T. 2015. Huge Durban advert flouts by-laws. *The Mercury*, 15 June. Available: https://www.iol.co.za/news/south-africa/kwazulu-natal/huge-durban-advert-flouts-by-laws-1871857 (Accessed 16 November 2021)

Buccus, I. 2017. Beachfront a triumph of urban development. *Independent Online*, 15 January. Available: https://www.iol.co.za/news/opinion/beachfront-a-triumph-of-urban-development-7409895 (Accessed 8 December 2020)

Cole, B. 2017. City faces eyesore battle. *Independent Online*, 14 July. Available: https://www.iol.co.za/dailynews/pics-city-faces-eyesore-battle-10288748 (Accessed 11 February 2021)

Damons, M. 2022. Tenants move into new Conradie Park social housing development in Pinelands. *GroundUp,* 7 February. Available: https://www.groundup.org.za/article/conradie/ (Accessed 6 April 2022)

Fitz, A. 2005. *Moriyama House*. Available: http://www.wohnmodelle.at/index.php?id=83,74,0,0,1,0 (Accessed 20 February 2021)

Gornstein, A. and Verrilli, A. 2006. Mixed-Income Housing in the Suburbs: Lessons from Massachusetts. *Citizens' Housing and Planning Association*. Available: https://www.chapa.org/sites/default/files/sssssssss.pdf (Accessed 15 March 2019)

Hall, C. 2015. Why JG Ballard's High-Rise takes dystopian science fiction to a new level. The Guardian, 3 October. Available: https://www.theguardian.com/books/2015/oct/03/jg-ballards-high-rise-takes-dystopian-science-fiction-to-a-new-level (Accessed 25 April 2017)

Head, T. 2015. You can compare your household income to the rest of SA... *The South African*, 05 July. Available: https://www.thesouthafrican.com/news/household-income-inequality-calculator-sa/ (Accessed 4 June 2019)

Ifejika, N. 2006. What does ubuntu really mean? *The Guardian*, 29 September. Available: https://www.theguardian.com/theguardian/2006/sep/29/features11.g2 (Accessed 22 January 2021)

Lu, E. 2020. HK is 'least affordable housing market' for 10th year running. *China Daily*, 21 January. Available: https://global.chinadaily.com.cn/a/202001/21/WS5e26574ba31 01282172726d3.html (Accessed 11 February 2021)

Malala, J. 2019. Why are South African cities still so segregated 25 years after apartheid? *The Guardian*, 21 October. Available: https://www.theguardian.com/cities/2019/oct/21/why-are-south-african-cities-still-segregated-after-apartheid#:~:text=Hence%20the%20stubbornness%20of%20spatial,new%20 residents%20into%20the%20cities. (Accessed 22 July 2020)

McCutcheon, B. 2019. Impacts of Salty Air on Metal Building Systems and How to Reduce Them. *Fasco America* (company website), 9 November. Available: https://info.fascoamerica.com/blog/salty-air-and-metal-buildings#:~:text=The%20combination%20of%20oxygen%2C%20salt,up%20to%2050% 20miles%20inland (Accessed 4 June 2021)

Miller, M. 2018. The life or death science of community: Three steps to living a longer, more connected life. *Six Seconds*, 13 June. Available: https://www.6seconds.org/2018/06/13/the-life-or-death-science-of-community-three-steps-to-living-a-longer-more-connected-life/ (Accessed 7 March 2022)

Paton, C. 2011. Low-cost housing to go high-rise. *Financial Mail*, 24 February. Available: http://www.urbanlandmark.org.za/downloads/clipping_fm_feb2011.pdf (Accessed 25 January 2019)

Robson, D. 2020. The ingredients for a longer life. *BBC Future*, 13 May. Available: https://www.bbc.com/future/article/20200512-the-ingredients-that-hold-the-secret-to-a-long-life (Accessed 19 January 2022)

Sayre, R. 2011. New York's Empire State of Mind: The Colonization of 'Up' Part I. *3 Quarks Daily*, 21 February. Available: https://3quarksdaily.com/3quarksdaily/2011/02/new-yorks-empire-state-of-mind-the-colonization-of-up-part-i.html (Accessed 2 November 2019)

Trivedi, C. 2020. Social construction simplified! *ConceptsHacked*, 25 November. Available: https://conceptshacked.com/social-construction (Accessed 28 April 2022)

Van Boom, M. 2018. How the Dutch do Affordable Housing. Available: https://interfaithhousinginitiative.wordpress.com/2018/07/09/how-the-dutch-do-affordable-housing/ (Accessed 13 January 2021)

Wainwright, O. 2021. Penthouses and poor doors: how Europe's 'biggest regeneration project' fell flat. *The Guardian*, 02 February. Available: https://www.theguardian.com/artanddesign/2021/feb/02/penthouses-poor-doors-nine-elms-battersea-london-luxury-housing-development (Accessed 18 February 2021)

Reports

CECODHAS Housing Europe and ICA Housing. 2012. *Profiles of a Movement: Co-operative Housing around the World.* Available: https://www.housinginternational.coop/resources/profiles-of-a-movement-co-operative-housing-around-the-world-volume-one/ (Accessed 22 December 2020)

eThekwini Municipality, Department of Strategic Planning. 2016. *eThekwini Inner City Local Area Plan*. Available: http://196.35.122.147/City_Services/development_planning_management/Documents/Inner%20City%20LAP%20Nov%202016.pdf (Accessed 22 February 2019)

eThekwini Municipality, Framework Planning Branch. 2013. *eThekwini City Density Strategy*. Available: https://paperzz.com/doc/8462692/ethekwini-city-density-strategy (Accessed 22 February 2019)

eThekwini Municipality Housing Typologies Study: Precedents and Bibliography (Presentation 1/5). 2009. Available: https://silo.tips/queue/ethekwini-municipality-housing-typologies-study-precedents-and-bibliography-pres?&queue_id=-1&v=1652706524&u=NDEuNzguMjQ3LjIzOA= (Accessed 25 January 2019)

eThekwini Municipality, Safer Cities Unit. 2016. *Ikhaya Lami: Understanding Homelessness in Durban*. Available: http://www.hsrc.ac.za/en/research-data/view/8181 (Accessed 24 February 2022)

Genossenschaft Kalkbreite. 2014. *PROJEKTDOKUMENTATION (Project Document)*. Available: https://www.kalkbreite.net/wp-content/uploads/2018/12/Projektdoku_2014.pdf (Accessed 23 December 2020)

Marx, C. and Charlton, S., 2003. Durban, South Africa. *UN-HABITAT (Hg.): Global report on human settlements*, 195-223. Available: https://www.ucl.ac.uk/dpu-projects/Global_Report/pdfs/Durban.pdf (Accessed 26 May 2021)

Province of KwaZulu Natal, Department of Human Settlements. nd. *FLISP brochure*. Available: https://www.kzndhs.gov.za/Uploads/documents/Services/Subsidy_Administration/FLISP/FLISP-BROCHURE.pdf (Accessed 8 December 2020)

South Africa, Department of Planning, Monitoring & Evaluation. 2016. *Impact and Implementation Evaluation of the Social Housing Programme*. Available:

https://www.dpme.gov.za/publications/Pages/Reports-and-Other-Information-Products.aspx (Accessed 15 July 2021)

South Africa, Department of Human Settlements. 2004. *Breaking New Ground: A comprehensive plan for the development of integrated sustainable human settlements.* Available: http://www.dhs.gov.za/sites/default/files/documents/26082014_BNG2004.pdf (Accessed 11 May 2021)

United Kingdom, Ministry of Housing, Communities & Local Government. 2020. *Affordable Housing Supply: April 2019 to March 2020, England.* Available: https://www.gov.uk/government/statistics/affordable-housing-supply-in-england-2019-to-2020 (Accessed 18 January 2021)

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Appendices

Appendix A

ARCHITECTURAL MUSINGS:

THE STARLING

A VERTICOLAPA FOR NORTH BEACH, DURBAN

Context/ Problem Statement

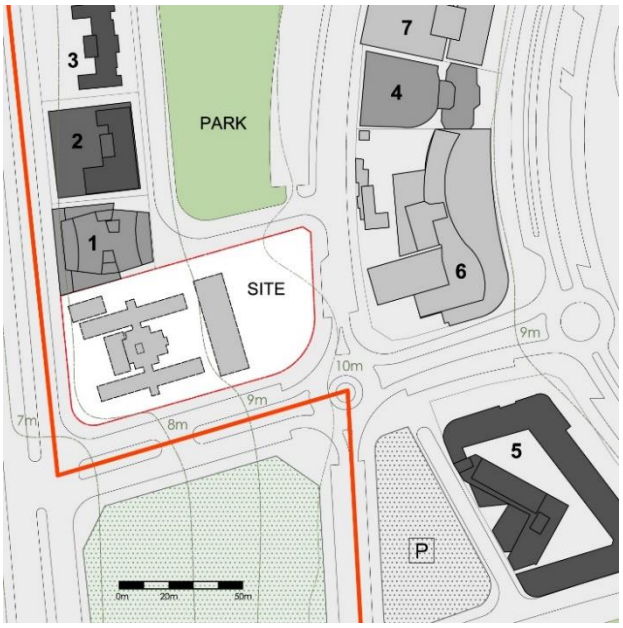
Relative to the rest of inner-city Durban, rental and property prices in North Beach are high. Thanks to the safe and cohesive nature of the neighbourhood, its convenient location and proximity to the beach, and the wide range of facilities suited to the Muslim community, the area is still desirable, but in recent years, flats have become more difficult to let due to an oversupply of smaller flats with low (1 or 2 pax) occupancy numbers. Modern lifestyles and economic pressures mean a demand for larger flats to accommodate families of five or more, and a need for greater flexibility in allowing more people to dwell together in smaller units, especially when it comes to small children, extended families and low-income households. In terms of buying and selling property, the price of flats has continued to escalate beyond what they are actually worth given their typically worn and outdated infrastructure, often shoddy renovations and dearth of communal facilities, and the still-prominent Shareblock model excludes all but the rich from being able to purchase flats here as banks will not bond such properties. Lastly, there has been pressure for some time now to produce more affordable housing options in and around North Beach, either purpose-built rental social housing or student residences, which has met with fierce resistance from existing residents worried about the effect such single-demographic low-income islands will have on the neighbourhood.

Client

The recently formed Starlight Housing Co-operative consists of 182 members, around half of whom are flat-owners and tenants currently residing in North Beach. The rest comprise a mix of young professionals and families looking to move into the city (some of whom are keen to get onto the property ladder), households that currently rent either social housing or privately-owned flats in South Beach and are looking for something more permanent and/or less chaotic, a few older folk looking to retire to the beachfront, and a mixed bag of Left-leaning Durbanites from all walks of life who are excited to sign up for this new way of living. After months of planning and negotiations, the co-op has secured a large, well-located site one road back from the frontline behind the Elangeni hotel, to be purchased from the municipality at a substantially-discounted price as it has stood derelict for two decades and eluded development.

Site

Property description:	71 Molyneux Rd
GPS location:	29°50'49.1"S; 31°02'00.4"E
Prior use:	*Star Homes* holiday facility for state orphanages
Site area:	0,55 Ha
Zoning:	rezoned to Mixed Use (MU1)



Size & density targets

The site completes an urban pattern, closing off the southern side of cul-de-sac that serves a cluster of residential high-rises and surrounds a public park. Key to the spatial enquiry is the strip of flats to the north of the site, then Grosvenor Court which sits diagonally across the turning circle to the Southeast and is the southernmost block in the neighbourhood, followed by the frontline strip which consists of a pair of linked Tsogo Sun hotels sandwiching a serviced residential skyscraper. Relevant building data as follows:

APARTMENT BUILDINGS

1	*Solace Place:*	*38 units on 0,13 ha =* ***292 du/ha***
		11 storeys; Est. parking factor = 1
2	*Stromboli:*	*80 units on 0,17ha =* ***470 du/ha***
		17 storeys; Parking factor = 0,75
3	*Protea:*	*76 units on 0,16ha =* ***475 du/ha***
		14 storeys; Parking factor = 0.61
4	*Maluti:*	*Est. 60 units on 0,16ha=* ***375 du/ha***
		31 storeys; Est. parking factor = 1
5	*Grosvenor Ct:*	*220 units on 0,52ha =* ***423 du/ha***
		20 & 7 storeys; Parking ratio = 0.67

HOTELS

6	*Elangeni:*	*22 storeys = 72.5m high*
7	*Maharani:*	*33 storeys = 100m high*

As the two most exclusive blocks of flats with the lowest densities and highest parking ratios, Solace Place and Maluti are atypical and weren't surveyed for this research, so estimates are used. Based on the other three nearby residential buildings that were surveyed, this Verticolapa should aim for a density of between 400 and 450 du/ha, a parking ratio whereby 2/3 of units have an on-site parking bay (so around 0,67) and a building height of 12 to 18 storeys. These parameters result in a development with between 220 and 250 units which, research shows, is too many to be housed in a single structure. The most units to be comfortably accommodated within a single structure is around 120, so the Starling comprises three separate building blocks or wings arranged around a central lift core, with walkways and stairs connecting them into a functional whole.

Target density:	400-450 du/Ha
Resultant no. of units:	220 to 248
Target parking ratio:	0.6 to 0.7
Height range:	12 to 18 storeys
Wings:	Three (A, B and C)

Proposed tenure and unit distribution

The development will provide a variety of accommodation options consisting of market rate flats to rent or buy, subsidised units for sale to gap market buyers and subsidised rental flats for eligible social housing beneficiaries, as follows:

Tenure spread:	35% Market rate rental
	25% Market rate owned
	20% Subsidised owned
	15% Social rental
	5% Guest House
Unit distribution:	10% Bachelors (24)
(based on 240 flats)	15% 0.5-bed (36)
	15% 1-bed (36)
	15% 1.5-bed (48)
	15% 2-bed (24)
	15% 2.5-bed (24)
	10% 3-bed (24)
	5% 3.5-bed (12)

Non-residential functions

North Beach has seen a steady decline in the quality and quantity of commercial offerings over the last two decades. Except for a few Halal eateries and a Chinese restaurant that operate primarily as take-aways, there is nowhere to sit down for a meal. Since this research began, a longstanding Mozambiquan restaurant, Hare Krsna canteen, hardware store, convenience store cum travel agent and Nedbank ATM have closed. The two remaining ATMs in the area are accessed directly off open parking lots and only one is guarded during the day. The area's two chain supermarkets supply the bulk of basic groceries for local residents, those working in and around the neighbourhood, and budget holidaymakers, but most North Beach households leave the area to supplement their grocery shopping, with some buying all their food outside the neighbourhood. Aside from expensive on-site restaurants, those staying in the hotels have few options for fresh prepared food. North Beach has no lettable office or workspace to speak of and, other than the public parks, no spaces where youth can meet or participate in gainful activities. As an output of the co-design workshop, the co-op agreed on the type of commercial spaces they would like to see in the development and identified some businesses that might be interested. For the anchor tenant, they put forward a well-researched proposal to Woolworths Food, making a strong case for not just the need in the area and surrounds, but how the upmarket retailer's confidence to invest in the neighbourhood will surely raise its profile, sparking a reversal in the creeping urban decay.

Amenities:	Woolworths Food	1500 m2
	Lettable Office space	300 m2
	Co-working space	200 m2
	Tech/gaming hub	150 m2
	Hardware/craft shop	150 m2
	Coffee shop	150 m2
	Créche	100 m2
	Ice cream bar	15 m2
	Florist	15 m2

Design process

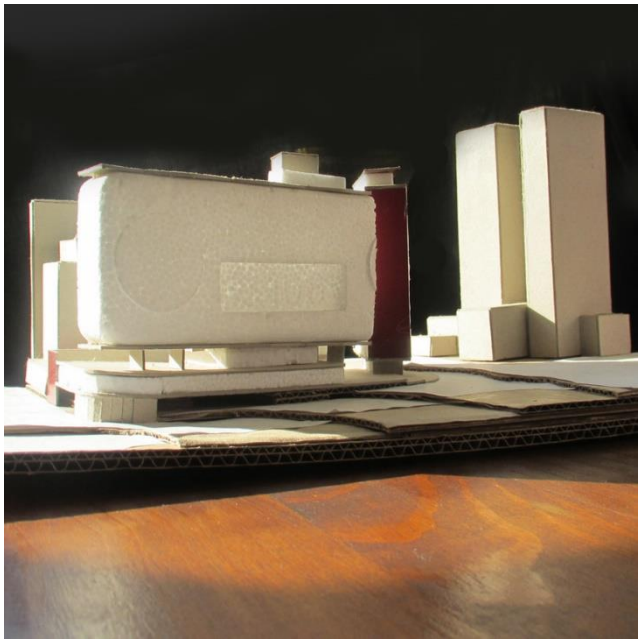
As with any architectural design, the plot of land's size, topography, shape and orientation with respect to sun, wind and views are the most influential parameters. With a 2m drop across the length of the plot, this site lends itself perfectly to an entire level of 'basement' parking that is completely underground on the higher (east) side but at street level on the other (west) side to accommodate drive-in delivery and collection trucks and loading areas. The east third of the site becomes a paved public plaza that steps up gently from the street and extends around and under the buildings to give access to the Level 0 shops, office reception and the Starling's main entrance foyer. The welcoming human-scale east boundary is entirely permeable, encouraging movement onto and across the site, while the west presents a bold, semi-permeable graphic façade around 9m tall to the fast-moving traffic on wide Sylvester Ntuli Rd. Resident parking is entered about two thirds of the way down the road on the south side, via a ramp down. In the event of long-term flooding or a permanent sea level rise, the basement is designed to be sacrificial: with a fully tanked lift core that can be sealed off, and pedestrian access from higher ground, the inhabitable parts of the complex can continue to function as residential space appears only on the first or second storey.

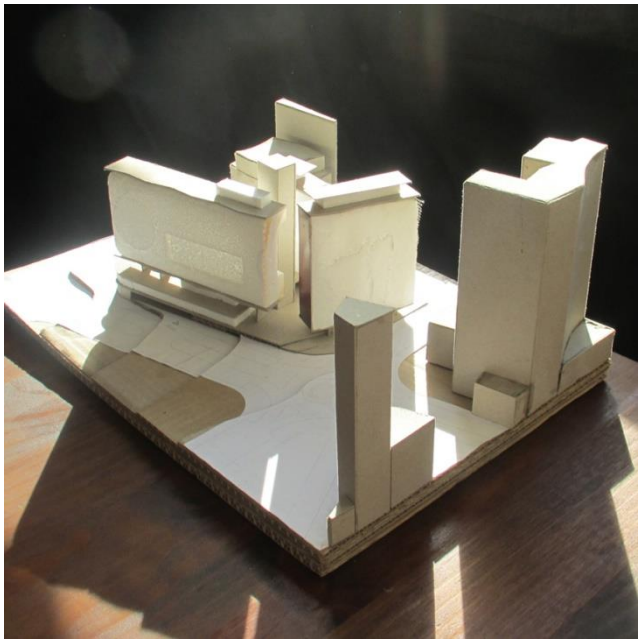
Tall bulk is placed on site to respond to the position and scale of surrounding buildings and avoid overshadowing and blocking of view corridors. Many different options were tested for arranging three outward-facing slab buildings of differing size and proportion around the site to form a plan shape resembling a capital J or U. It was found that rotating the two smaller slabs at a slight angle to the site boundary, and varying the conditions where each block connects into the podium or ground, results in the most spatial variety, breaking down the development's form to the extent that it almost reads like three separate buildings and creating opportunities to activate the roof levels in different ways and reimagine the circulation spaces as a system of semi-open 'skywalks' and 'sky lounges'.

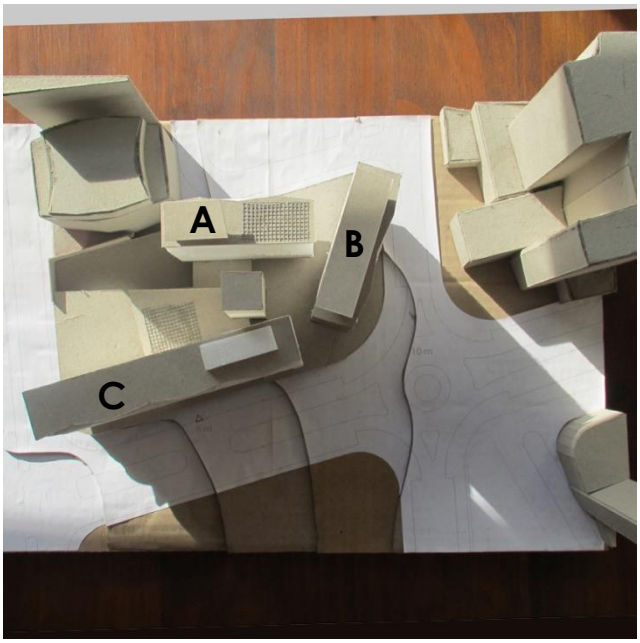
Block A: North aspect (park views)
11 floors (1st to 11th) of flats
Average 6 units/floor = 66 units
Ground – Starling reception; Residents' common room, library and garden; Coffee shop;
Roof – Social terrace with common lounge, sun deck and gardens

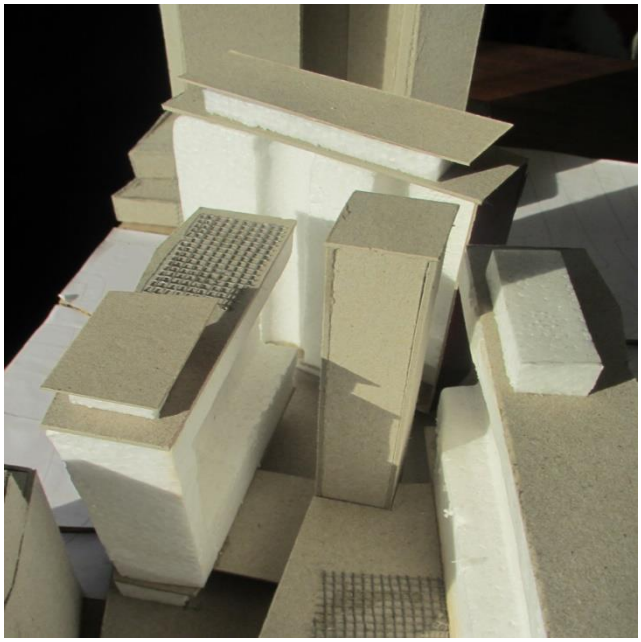
Block B: East Southeast aspect (partial sea views)
16 floors (1st to 16th) of flats
Average 4 units/floor = 64 units
Ground – Lifted on pilotis; Kiosk spaces for the ice cream bar and florist
Roof – two penthouse units with terraces

Block C: South Southeast aspect (city views)
14 floors (2nd to 15th) of flats
Average 8 units/floor = 112 units
Ground – Woolworths Food; ATMs; Gaming hub; Craft/Hardware store
First – Offices; Co-working space; Créche; Veggie gardens
Roof – Laundry room and drying lines







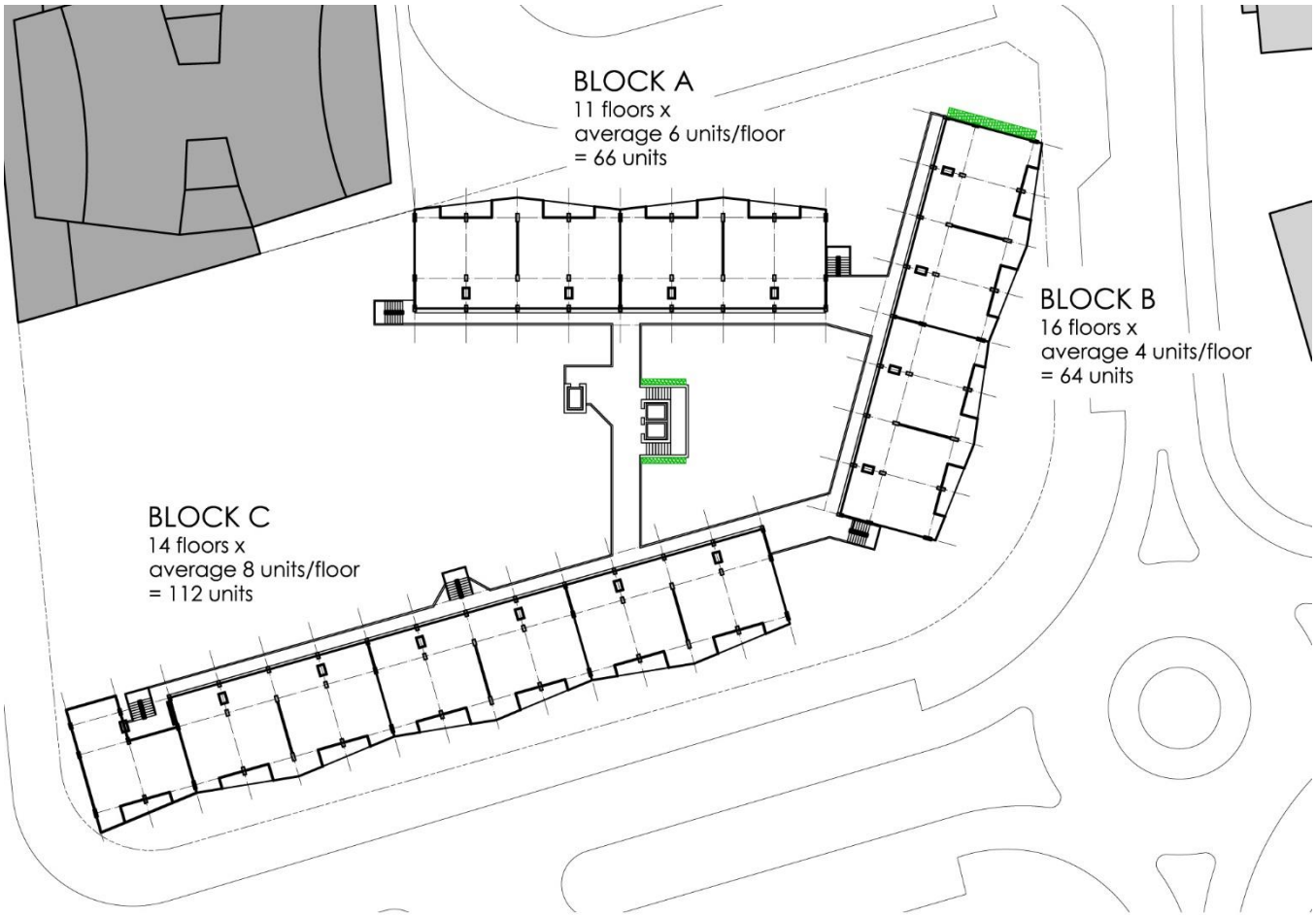




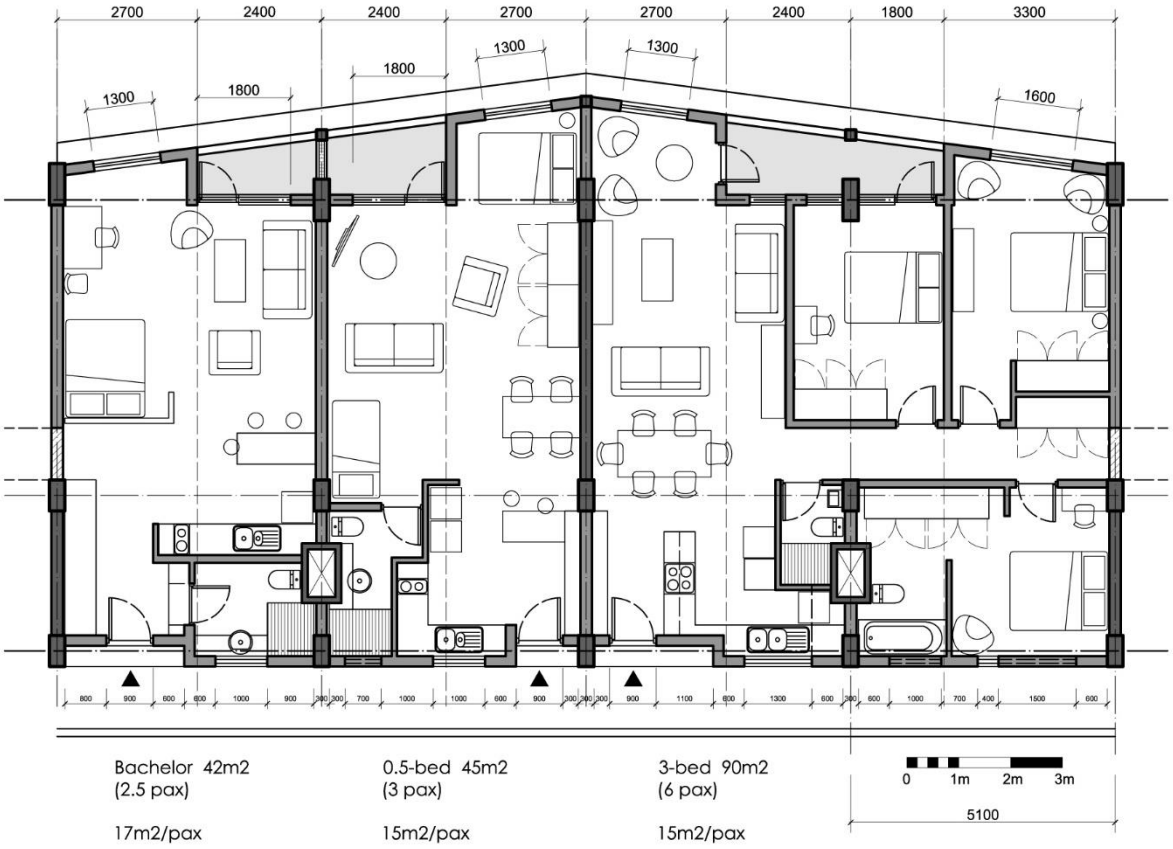
Site Plan - PLAZA LEVEL (Level 0)



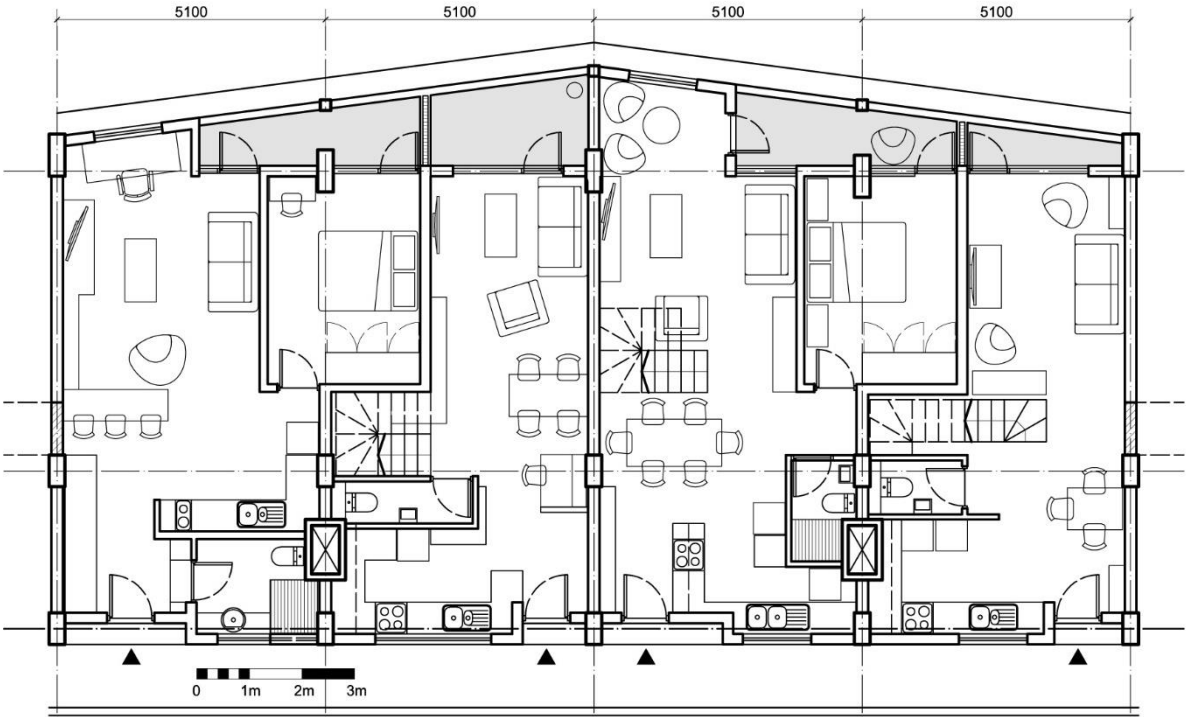
Site Plan - PARKING BASEMENT (Level -1)



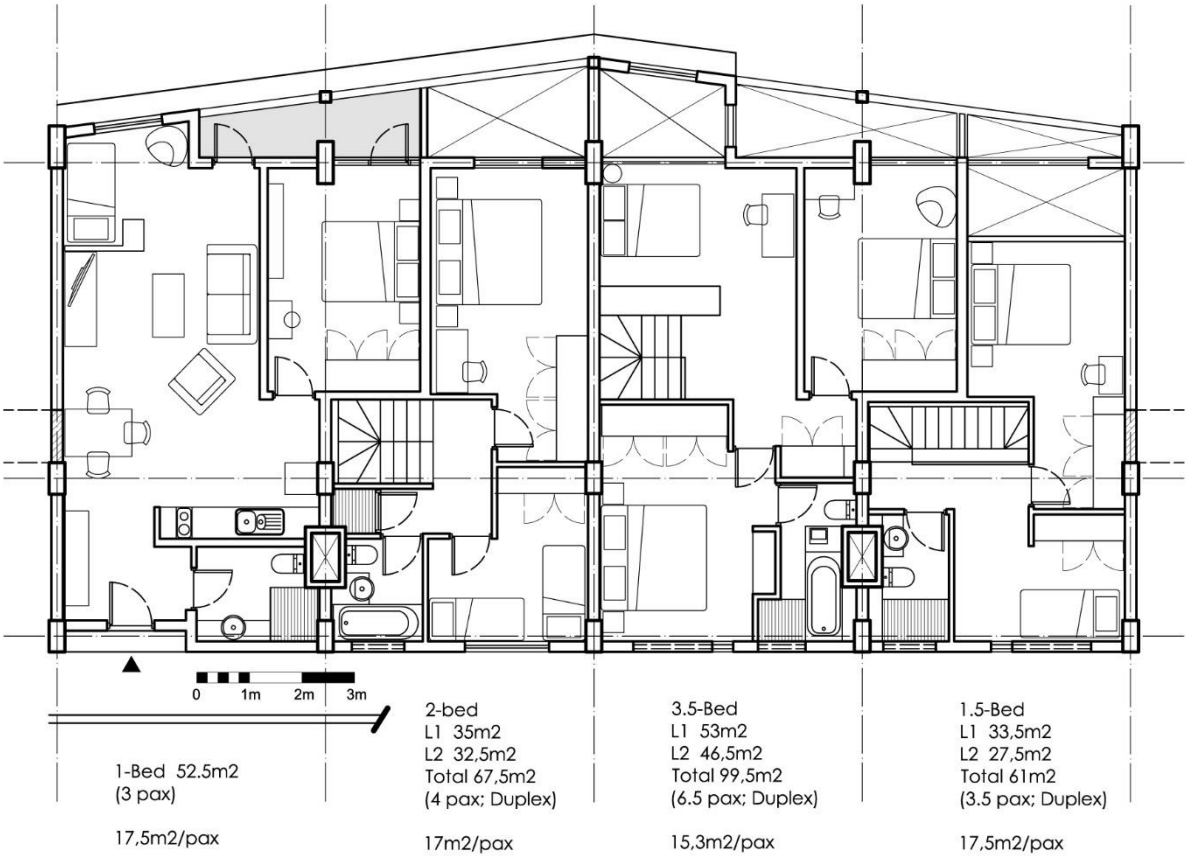
Site Plan - TYPICAL RESIDENTIAL Level (2 to 11)



Typical Residential Cluster - SINGLE STOREY



Duplex Residential Cluster - LOWER LEVEL



Duplex Residential Cluster - UPPER LEVEL

Questionnaire

Interview #:

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Date: ……..……..…….. *Time* ……...

Interviewee name…… Contact: ……...

Building: **Floor:** **Unit #:**

Section 1: PARTICIPANT INFO

Q1	Age:	
Q2	Gender:	
Q3	Describe your identity:	
Q4	What race do you identify as?	Black / Coloured/ Mixed-race / Indian/ Asian / White / Other
Q5	Education (highest):	
Q6	Occupation:	
Q7	Where were you born?	
Q8	Where did you grow up? (location, house type)	
Q9	Tell me a little about your family:	

Section 2: UNIT INFO

Q10	How long have you lived in this flat?	
Q11	Size (m2):	
Q12	No. of rooms & designation:	
Q13	Rent or Own?	
Q14	Cost/ Value?	
Q15	Approximate Household Income (monthly):	<6K / 6-12K / 12-20K / 20-30K / 30-50K / >50K
Q16	Number of occupants:	
Q17	Occupant ages, sex & relation:	
Q18	Describe the style/ furnishings/ objects/ equipment in the unit:	
Q19	Describe the security measures in your unit:	
Q20	Vehicle ownership/parking for this unit?	
Q21	What do you like MOST about the design of this flat?	
Q22	And LEAST?	

Section 3: BUILDING INFO

Q23	How long have you lived in the building?	
Q24	Do you use: A. Lift B. Stairs C. Both	
Q25	Avg. time taken from building entrance to flat entrance:	
Q26	How would you rate the management of this block? (1-10)	
Q27	Describe how you feel about others in this block:	
Q28	How many other occupants do you know (to recognise/greet)?	On this floor:
		In the building:
Q29	How many friends?	
Q30	And comfortable asking a favour?	
Q31	So where DO your close friends live?	
Q32	Describe any communal facilities and your use of them:	

Q33 Experience of the building (phenomenology):

Sense	LIKE	DISLIKE	Comments
Sight			
Sound			
Smell			
Touch			
Feeling/ Emotion			

Q34 How much do you worry about the following?

Event	*NOT AT ALL*	*A LITTLE*	*QUITE A BIT*	*ALL THE TIME*	Comments
Fire					
Break-ins					
Personal attack					
Terrorist attack					
Natural disaster (e.g. earthquake, tsunami)					
Other.....					

Q35	What do you like MOST about this building?	
Q36	And LEAST?	

Section 4: NEIGHBOURHOOD INFO

Q37	How long have you lived on the beachfront?	
Q38	How do you travel around daily?	
Q39	How far are you from the following essential services:	

	PLACE(S)	DISTANCE (Km)
Work		
School/ College		
Place of worship		
Grocery shop		
Specialist goods		
Healthcare		
Primary exercise		
Primary entertainment		

Q40	Describe your use of the beach & sea (frequency & purpose):	
Q41	Describe your use of the promenade (frequency & purpose):	
Q42	What do you like MOST about this neighbourhood?	
Q43	And LEAST?	

Section 5: GENERAL INFO

Q44	Why do you live here?	
Q45	How long do you plan to live here and where might you go afterwards?	
Q46	Do you consider this HOME?	
Q47	How satisfied are you living here (1-10)?	
Q48	What is the one thing about your living situation you would change if you could?	

---

* [PHOTO/S]

**	What NAME would you like used in the study to disguise your real identity?	
***	Lastly, do you perhaps have any friends - in this block or another in the study area - who you think would be willing to participate in this research? If so, please could you chat to them and if open to the idea, pass their contact details on to me.	

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RESEARCHER OBSERVATIONS

Interview #:

UNIT

Floor No. …… Distance from lift to front door of unit (m): ……...…...

Orientation/ position in building:

Floor Plan of unit:

BUILDING

Security: ……

Lifts: ……..

Circulation Spaces: ……...

NOTES: